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INDIANA UNIVERSITY, 1820-1920
CENTENNIAL MEMORIAL VOLUME

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Sec 2. It shall be the duty of the General Assembly, as soon as circumstances will permit, to provide, by law, for a general system of education, ascending in a regular gradation, from township schools to a State university, wherein tuition shall be gratis, and equally open to all.

FROM THE CONSTITUTION OF 1816---ARTICLE IX, SECTION 2

Foreword

THE AMERICAN PAGEANT, as I see it, has two movements. First is a descent. Whenever civilized men have gone far into the wilderness to live, they have at first lost some part of their civilization.

For an immediate illustration, take Indiana in the middle of the last century. Our people had the civilized mother tongue. But in 1840 fourteen per cent of the adults (38,600) could not read or write, and in 1850 twenty-two per cent of them (75,017) could not read or write. They had schools, academies, colleges, men and women of learning and cultivation. But in 1848 forty-four per cent of our people voted against free public schools, and in this county, the seat of this University, seventy-nine and four-tenths per cent of the people voted against free public schools. They had the law, the ancient law developed in southern and western Europe since before the Christian era, and some men learned in the law. But in 1852 our people wrote it into their constitution that a man might be a counsellor at the bar however ignorant, and they prescribed that in criminal cases a jury however ignorant should be the sole judges of the law. They were not without the elements of art. They had music. They had the pioneer melodies that Riley loved to hear the Old Band play. We are not ashamed of the melody nor of the Band. But the great music was not there. The empire of Beethoven was as far from our people generally as the empire of Genghis Khan.

The making of a home in America by Europeans since 1492 is the greatest event of modern history. But everywhere at first it involved descent.

I have an opinion as to WHY civilization goes down and down in the backwoods. It is, I think, because the circle of great vocations, the learned professions, the sciences, the arts, the more delicate handicrafts cannot be kept up there on the highest level. There is not a living for those who follow them. The occasional genius may be there. But the circle of masters surrounded by a swarm of journeymen and apprentices is never there. The finer arts are lost. The children of the woods forget what their fathers

ers knew. And as they forget and forget they sink toward the barbaric life.

Nevertheless in the American backwoods there were always conditions which made possible re-ascent. There was always the blood of the great races. There was always the potential capacity to do any sort of work which is possible for a man. There was always the potential hunger to resume the great occupations at their best. There was sometimes, as I have said, the genius who came up out of the woods to win world recognition and show his neighbors a glimpse of the upward way.

And so, as soon as it was possible, as soon as they had earned a little leisure, the eager children of the woods began to climb the upward ways. They began to hear from far the voices of the great masters in every vocation. They began to glimpse from far the vision of science, the vision of art, perhaps the vision of industry not divorced from art or from religion. This is the thrilling second scene of our American Pageant, of our Indiana Pageant,—this eager throng who will relearn all that the ancient East can teach and will then cheerfully dare in every vocation new ventures of which the East dared not to dream.

WILLIAM LOWE BRYAN.

PART I

HISTORY OF INDIANA UNIVERSITY

DAVID DEMAREE BANTA was born in Johnson county, Indiana, May 23, 1833. He attended Franklin College for a time, but later entered Indiana University from which he was graduated B.S. in 1855 and LL.B. in 1857. He was judge of the sixteenth judicial circuit, 1870 to 1876, and a trustee of Indiana University from 1877 to 1889, serving as president of the board from 1882 until his resignation in 1889. In the latter year, upon the revival of the School of Law, he became its first dean, holding this position until his death in Bloomington on April 9, 1896. Judge Banta was the author of *A Historical Sketch of Johnson County, Indiana*, and of a work entitled *Making a Neighborhood*, dealing with the old Shiloh Church neighborhood in western Johnson county. He also wrote a number of papers and sketches relating to local history and out-of-door subjects.

HISTORY OF INDIANA UNIVERSITY

By the Late DAVID DEMAREE BANTA, '55

[The following six addresses were delivered by Judge Banta on successive Foundation Day from 1889 to 1894, during the time of his service as dean of the School of Law. These manuscripts are in the possession of the University, and the addresses were published one after the other in successive issues of the *Indiana University Alumni Quarterly*, beginning with the first issue of the magazine, January, 1914.]

I. THE SEMINARY PERIOD (1820-28)

IN THE ACT of Congress of April 18, 1816, providing for the admission of Indiana into the Union, is found the germ of the Indiana University. Certain propositions were tendered by that act to the people of the proposed new state for "their free acceptance or rejection", two of which related to education; and one was the proposition on the part of the federal government to donate to the new state a township of land "for the use of a seminary of learning".

The constitutional convention met at Corydon on June 18 following, and in nineteen days framed an organic law under which Indiana was admitted and her people prospered for thirty-five years. To the lasting honor of the members of that convention be it spoken, they accepted the proposition of Congress relating to learning in a spirit as broad and liberal as that in which it had been tendered. I need not stop to read to you the splendid tribute they paid to liberal learning, nor the pledge they made to faithfully execute the trusts imposed by the liberality of Congress. It is enough for me to present in their own words a summing up of the duties the people of the new state assumed in behalf of their schools. In the second section of the ninth article it is declared that "It shall be the duty of the General Assembly, as soon as circumstances will permit, to provide by law for a general system of education ascending in a regular gradation from township schools to a State University, wherein tuition shall be gratis and equally open to all."

Whatever may be said as to the subsequent performance, the pledge given by the new state was as liberal as the most zealous friend of learning in all the land could have wished. The state stood committed by her organic law to a free school system that should begin in the district school and end in the University.

On July 10, eleven days after the convention had adjourned,

President Madison designated the Seminary township. This township, which in the subsequent organization of Monroe county became a part thereof, had been surveyed under the laws of the United States as early as 1812, and the notes of the surveyor were doubtless before the President when the selection was made, for it was apparent that a better selection could not have been made within the then surveyed limits as near to the geographical center of the state. The township chosen was well timbered and well watered, and its many productive farms of today attest the native fertility of the soil.

To the framers of the constitution it was evident that the sale of any of the school lands at that time would be imprudent, so they provided in the organic law that none should be sold before 1820.

The settled parts of Indiana at the time of the admission were confined to a narrow fringe of territory extending down the Ohio state line from Wayne county to the Ohio river, and thence down that river to the Wabash, and up that to Vincennes. The larger parts of what are known as eastern, southern, and western Indiana, and all of central and northern Indiana, were a wilderness. Less than a fourth part of the lands within the state had been surveyed, and to nearly all the unsurveyed parts the Indians claimed title. The southern Indian boundary line crossed the Wabash a few miles south of the present site of Newport in Vermilion county; and thence it ran southeasterly, crossing the west fork of White river at Gosport, and thru the territory now known as Monroe county, leaving fully a fourth of it on the Indian side, and struck the east fork of White river about midway between Seymour and Brownstown, whence it ran in a general northeast course till it cut the Ohio line east of the present site of Portland in Jay county. The white population of the state verged upon 64,000, and delegates from thirteen border counties sat in the constitutional convention.

By a treaty made with the Delaware and some other Indians, in the fall of 1818, the southern Indian boundary was set back well up towards the sources of the Wabash river; and two years thereafter the door to all of central Indiana, then and long after known as the New Purchase, was thrown open to an anxious throng of hardy pioneer home-hunters.

In spite of the manifold hindrances in the way of a speedy colonization of the New Purchase, the settlers came in. It is a difficult matter for the people of today to gain an adequate idea of all they had to encounter; and yet without something of this, no one can rate at its true value the founding and maintenance of our beloved

school here in the woods. Before the Indians had ceased to occupy, the advance guard began to invade the New Purchase; and by the fall of 1820 the sound of the pioneer's ax was heard in every county watered by White river and its tributaries, from the "Forks" to its sources. The immigrants came by way of the Indian trails or cut "traces" thru the woods. Some came in wagons and some in sleds. Many packed in on horseback, and a few came on foot. In 1820 the census showed a population of more than 147,000, as against 64,000 of five years before; and by 1825 it had mounted up to a quarter of a million.

These were all poor men—poor even for their own day. Most were able to buy forty, eighty, or a hundred acres of land at "Congress price", but there were comparatively few that could do more.

What had they undertaken? To subdue the wilderness; to wrest from reluctant Nature a livelihood for themselves and their families; to construct highways; to build towns; to establish churches and schools; and, in a word, to make a state.

What had they to encounter? Who can tell! The story of their hardships never has been and never can be fully told. We have not time to dwell upon it here. Let us be content with a bare recital of some of the topics that would enter into the story. There was the forest—dense, damp, gloomy, unexcelled in its magnitude on this great forest continent of ours; swamps interminable where now are fruitful fields; wild beasts waiting to devour the products of labor; the late and early frosts; the annual floods; the want of markets; a financial revulsion more disastrous in its consequences than has ever cursed the people of Indiana since; and the almost universal prevalence of the autumnal and other sicknesses peculiar to a new country. From 1820 to 1825 the mortality in the state was appalling. In the fall of 1820 the sickness in the Blue river settlements was so great that there were not enough well persons left to nurse the sick ones. In 1822 an epidemic of fever broke out in the new town of Indianapolis and carried off seventy-two persons, one-eighth of the population. In 1820 over one hundred out of the population of six hundred died in Vevay. Palestine, then the seat of justice in Lawrence county, was nearly depopulated; and in "most neighborhoods", says an early historian, "there were but few persons who escaped without one or more severe attacks of fever". "Death numbered his victims by hundreds. The land was filled with mourning and the graveyards filled with the pioneer dead."

Notwithstanding the United States surveyors had established the "lines and corners" thruout the greater part of Monroe county

as early as 1812, the first pioneer's cabin seems not to have been built within the present county boundaries till some time in 1815—a backwardness to take advantage of the public surveys that can be accounted for by the nearness of the Indian country. In that year David McHolland, a famous hunter and a “jovial fiddler”, settled on Clear creek close up to the south boundary of the Seminary donation. Others followed, a few the same year, more the next, and so on. In 1816, according to the local historian, the first white men's cabins were built on the after-site of Bloomington. Early in 1818 Monroe county was organized, and in April of the same year Bloomington was staked out adjoining the Seminary township on the north.

The new town seems to have outstripped all of its inland competitors, a circumstance due mainly to the nearness of the Seminary township. At the close of the year it contained 140 inhabitants, living in thirty hastily constructed cabins; and the number was doubled the year following. By 1820 the public square was cleared of the last of its native forest trees, the log courthouse was outgrown, and Colonel John Ketcham was at work on a brick structure which, when completed four years later,¹ was esteemed so highly for its great beauty of design and excellence of finish that the county commissioners ordered that it should not be opened to the gaze of profane eyes save for certain specified purposes, one of which was “when any person shall want admittance for the purpose of acquiring architectural knowledge”. Thus early was Bloomington vaunting herself on account of her educational facilities.

The constitution, as we have seen, inhibited the sale of any lands granted for school purposes before 1820. That time was now at hand, and whatever the sentiment elsewhere might be, Bloomington was ready for the new State Seminary. The legislature was to meet in December and would last about six weeks. Monroe county was attached to other counties for representative and senatorial purposes, and it so happened that her people were not represented in either house by a citizen from their midst. In the lower house, John DePauw answered for them, and in the upper, Alexander Little, both from the same county, Washington. The men of Bloomington were not satisfied with this posture of affairs, and it is little wonder. There is no record—there is not even a tradition—remaining of any

¹The courthouse was not entirely completed, inside and outside, until 1826. It was painted bright red, penciled with white, and was surmounted with a cupola containing a public clock. In 1856-58 it was remodeled by the addition of two brick wings. It stood in this form until its demolition in 1906, to make room for the present building of white limestone.

meeting held by them to take counsel concerning the matter; but I have no doubt the meeting was held. At any rate the people determined to have an agent from Bloomington on the ground—a member of the Third House, if you will.

Whom should they send? Dr. David H. Maxwell. He had some legislative experience, having been a member of the constitutional convention from Jefferson county. He had a general acquaintance with public affairs and with the public men of the state, and above all he was plausible, conciliatory, level-headed, and a good judge of human nature. This was the first service he was called upon to render an institution to the furthering of whose interests he was ever after devoted. For nearly forty years, of all men outside the circle of those engaged as teachers, he gave the most of time in its service, and to better purpose. So unremitting was he in his labors in its behalf, and to such good purpose were they directed, that it can better be said of him than of any other, "He was the father of Indiana University."

The General Assembly was to meet on the first Monday in December, and mounting his horse the Bloomington agent rode over the hills the long and weary road to Corydon. No record, no tradition even remains to tell the story of what he did to secure legislative action in behalf of a state school. But was not the Bloomington member charmed as he listened to the reading of Governor Jennings' message? Said the governor:

The convention has made it the duty of the General Assembly, as soon as circumstances will permit, to provide by law for a general system of education. The lands received for the use of the seminary of learning are vested in the legislature to be appropriated solely for that purpose, and it is submitted to your consideration whether the location of such institution upon or near such lands would not greatly enhance their value and enlarge the funds for a purpose so important. It is believed that the Seminary township situated in Monroe county would afford a site combining the advantages of fertility of soil with a healthy climate, as well as a position sufficiently central to the various sections of the state. To authorize the sale of a portion of these lands under judicious regulations would increase the value of the residue, and the sooner enable us to lay the foundations of an institution so desirable.

This part of the message was, on December 11, referred by the House to a committee of seven, of which Mr. Ross of Clark was chairman, with leave to report by bill or otherwise. On December 31, twenty days after the reference, Mr. Ross on behalf of his committee reported a bill to establish a seminary, which was read a first and a second time and then referred to a committee of the whole House and made a special order for the following day. But

the following day came and passed and nothing was done with the bill. It was not till January 11 that we again hear of it. There was just then a pressure of the multifarious business that found its way into the legislative halls of the state under the constitution of 1816. There was an administrator clamoring for some sort of relief in the matter of his trust. The sheriff of Wayne county had a grievance concerning the public accounts which only a legislative act could set right. Sally Griffit wanted a divorce from her husband and there was no other tribunal to which she could go. Someone prayed to be encouraged in the manufacture of salt, and the legislature was in duty bound to encourage him. The clerk of the Washington circuit court having been charged with a misfeasance in office, the House of Representatives preferred charges against him, and the Senate had to sit as a court to try the cause. A highway being wanted to connect a new town in the New Purchase with an old one outside, only the lawmaking power of the state could authorize it to be cut out. A commission to locate the new capital of the state had to be appointed, and the toll to be taken by millers for grinding the farmers' corn must be regulated by law. So you can see a good excuse can be made by the House for the delay in acting upon the bill. On January 11, however, the bill was taken up and passed with "sundry amendments".

Four days after we find it in the Senate in committee of the whole, when "some amendments were made thereto", one of which was to vest in the trustees of the Seminary the Seminary lands in Gibson county,² and the other was to strike from the bill the following: "Provided that two thousand acres of land in Monroe county, above vested in the trustees, be forever reserved by said trustees as a glebe for the said Seminary and the use of the professors thereof."

This was on Saturday, but the final vote was not reached till Monday; and when it did come, how nearly the Seminary bill failed becoming a law will be known when it is stated that on the call of the yeas and the nays, five of the ten senators voted in the affirmative and five in the negative. The president of the Senate, Lieutenant-Governor Ratliffe Boon, gave the casting vote in its favor, and so the bill as amended was passed.

The next day it was back in the House, and the amendment striking out the proviso concerning the "glebe" was concurred in, while the one vesting title to the Gibson county lands in the trustees

²Reserved by act of Congress approved March 26, 1804; located by Albert Gallatin as Secretary of the Treasury, October 10, 1806.

was rejected. Forthwith it was returned to the Senate. The celerity with which it was sent from chamber to chamber reminds us that there was a man on the ground especially interested in its final success. Immediately on its return to the Senate, Mr. Drew of Franklin moved that the Senate adhere to their amendments; which, says the record, "was decided in the negative and the bill was then passed". The next day, January 20, 1820, the day we celebrate, it was signed by the governor and became a law of the land.

The act which so narrowly escaped defeat provided for the organization of a State Seminary at Bloomington. The first section named for its trustees Charles Dewey, Jonathan Lindley, David H. Maxwell, John M. Jenkins, Jonathan Nichols, and William Lowe—"they and their successors in office to have perpetual succession". They were authorized to meet in Bloomington on the first Monday of the following June, and select "an eligible and convenient site for a seminary". It was made their duty to appoint an agent to lay off and sell under their sanction any parcels of land contiguous to Bloomington, not exceeding 640 acres. As soon as the trustees should deem it expedient, they were to "proceed to the erection of a suitable building for a State Seminary, and also a suitable and commodious house for a professor". They were to report to the next General Assembly their proceedings, together with "a plan of buildings by them erected".

This law is more remarkable for what it does not contain than for what it does. Its projectors evidently had little conception of the real nature of the work in hand. It left the future committed almost entirely to the wisdom of the trustees. The duties it imposed upon them looking to the real purposes of a seminary were to select a site, sell a section of land, and erect suitable buildings. Not a word in it about a school.

And yet, I believe it was the very best law the legislature could have framed at that time.

On the first Monday in June, 1820, which was the fifth day of the month, four of the six trustees met at Bloomington, in accordance with the requirements of the law, to select a site for the State Seminary. On that day the commissioners to locate a site for the state capital were traversing the wilderness between Conner's Prairie and the Bluffs on White river in the search of a suitable place. On the ninth the future site of Indianapolis was chosen. The Seminary commissioners were less fortunate. Two of the members, Charles Dewey and Jonathan Lindley, were absent; and as both were men of some consequence, Dewey especially, it was

thought best to adjourn over to the "next month". "Accordingly on the —— day of July" the board met, every member present save Jonathan Lindley, and proceeded at once to select a section of land on the reserved Seminary township for sale, and to locate a site for a seminary. In their report made to the next legislature they say: "The site chosen is . . . about one-quarter of a mile due south from Bloomington, on a beautiful eminence and convenient to an excellent spring of water, the only one on the section selected that could with convenience answer the purposes of a seminary."

Not to exceed three hundred souls lived in Bloomington at the time. Into the open doors of their cabins, clustering around the square, the early morning and late evening shadows fell from the native beeches and maples and oaks and poplars, still growing close around. One square south of the public square was the boundary in that direction of the town. Beyond that lay the thirty-six square miles of Seminary land, in which not a tree had lawfully been cut down. Hunters from the town and the scattered settlements around killed deer along its water courses, and bears and wolves prowled amidst its thickets. In any other direction the outlook was but little better. Here and there a little field had been chopped out around a settler's cabin, it was true, but in the main the wilderness still held sway. It was in July, and every green thing was thick with leaves. Those contrasting views of upland and lowland which please the eye of the Bloomington visitor today were enveloped in shaggy thickets of green, and to this cause more than to any other, doubtless, is due the fact that the trustees, overlooking the slightly highlands to the east and the west, found a "beautiful eminence" in the narrow plateau next the Clear creek bottom. True, the "excellent spring of water" must not be forgotten in this calculation, tho its fountain has long since dried up. It was the only spring on the section, they naïvely said, "that could with convenience answer the purpose of the Seminary",—as if the art of digging wells was not yet known!

A plan of a building was agreed upon at this meeting of the board and reported to the legislature, and altho it has long since been lost, the board tells us in their report that it was "on the plan of Princeton College in New Jersey"—the historic Nassau Hall.

I dare not in this presence enter upon any discussion of the financial history of the Indiana Seminary. My time is too short for that. Nor can I make more than the briefest reference to the

buildings that were ultimately constructed for the accommodation of students and a professor.

Over twenty months passed away after the location was made before the work of building was actually begun. Two houses were agreed upon, one for the "reception of students" and the other for a professor's dwelling. This last, according to the old record, was to "be of the size of W. D. McCullough's house which he had rented to Thomas Allen of Kentucky, except that it was to be four feet longer", a statement by no means calculated to improve the temper of the searcher after historical facts. In a report made to the legislature at a subsequent time, by Dr. David H. Maxwell, he tells us that it was thirty-one feet long and eighteen feet in width, and cost \$891.

The Seminary edifice proper, we learn from the same report, was sixty feet long and thirty-one feet wide. It was two stories high, and when new was considered quite a pretentious building. It faced to the east, had a chapel and two recitation rooms on the first floor, and I know not how many rooms on the second. It cost \$2,400.

While the General Assembly was legislating the Seminary into existence, a young man, destined to be its first professor and to stay with it thru its Seminary life, and to be with it when it passed up into Indiana College, and finally to leave that college a disappointed and embittered man and write a book maligning his enemies and making sport of his friends,³ was taking his last year's course of lectures at Union College, under the celebrated Dr. Nott. This young man was Baynard R. Hall. After receiving his first degree at the commencement of 1820 at Union, he went to Princeton where he studied theology, after which he was ordained a minister of the Presbyterian church. Returning to Philadelphia, his natal city, at the close of his theological studies, he married and soon after set out with his bride for the New Purchase.

This must have been some time in 1823. He had relatives in the New Purchase and out of it, one of the latter being the Rev. Isaac Reed, a brother-in-law, who lived in Bloomington. Another brother-in-law, John Young, besides other relatives, lived in the New Purchase a short distance above Gosport.

³*The New Purchase, or Early Years in the Far West.* By Robert Carlton, Esq. (Baynard R. Hall). The first edition, in two volumes, was published by Appletons, Philadelphia, 1843; the second edition, in one volume, New Albany, Ind., 1855, by Mr. John R. Nunemacher; the third edition was edited by Professor James A. Woodburn, '76, of Indiana University, and published by the Princeton University Press in 1916 as an Indiana state centennial edition. For some account of this book see an article entitled "Life in the New Purchase" by James A. Woodburn, in the *Indiana Magazine of History* for December, 1913.

I do not certainly know, but I have reasons to believe, that it was the new State Seminary that led Hall into the Indiana wilderness. He was scholarly, and his brother-in-law, Isaac Reed, must have seen that if he were only on the ground when the time for the election of a professor came he would surely be the chosen one.

At any rate Hall came, and on reaching the state he went to his Gosport relatives, where he remained until the Seminary apple ripened and was ready to fall into his open mouth. During his sojourn there he assisted his brother-in-law in a tanyard and in a country store. He hunted a good deal and became an expert marksman; preached some, went to log-rollings, house-raising, quiltings, camp meetings, political speakings, and was, he himself says, "the very first man since the creation of the world that read Greek in the New Purchase".

In November, 1823, the Seminary building had progressed so far toward completion that it was thought advisable to elect a teacher, and take such other steps looking to the commencement of educational work as should be deemed proper. Accordingly, on November 20, the board being in session, the Rev. Baynard R. Hall was elected such teacher "for the term of one year, the school to commence as early as practicable the next spring". Two terms per year of five months each were provided for, and the tuition fixed at five dollars per term, but was subsequently raised to ten. The teacher's salary was fixed at \$250 per annum, the trustees reserving to themselves the right to pay more should the income admit of it—a right that we believe was not exercised.

One of the curious chapters of those times would narrate the low wages paid for all kinds of intellectual labor. The governor of the state received \$1,000 per annum; a supreme judge and a judge of the circuit court each \$700; a member of the General Assembly drew \$2 per day, and legislated on Christmas and on New Year's days the same as on any other, except when they happened to fall on Sunday. Ministers, well educated and of excellent abilities, who received salaries of \$300 were deemed well paid. The great majority were paid much less than this. The Rev. Joseph Tarkington and Joseph Evans, who rode the circuit in the Indiana district in the twenties, each received \$63 for the year's labor. During the ministerial year of 1823-24, the Rev. Aaron Wood traveled, according to his diary, 2,250 miles, preaching 288 times, for a salary of \$50. The author of *Early Methodism in Indiana* says:

Our presiding elder, Rev. Allen Wiley, a man of varied learning, deep in theology, strong in faith, and full of the Holy Ghost, received that year (1830) as his

portion of the sum total \$20. My colleague, Rev. Amos Sparks, a most unique man, full of good common sense, of marked eloquence and power in the pulpit, and popular with the people, received for his portion, being a married man with several children, \$175, a part of which was paid in dicker.

Two years after the election of Baynard R. Hall, Lucius Alden, a Presbyterian clergyman of Boston, was elected principal of the Aurora Seminary at a salary of \$300 per year and accepted. His assistant, Stephen Harding, afterwards a United States judge in Utah, was paid, says an authority, \$5 per month, and \$13 says another. Probably both are correct, the reference being to different periods during his term as assistant.

The simplicity of these times can be presented in no stronger light than thru the methods then in vogue in carrying on the ordinary business transactions of life. Money was seldom seen in the cabins of the people. Nearly all the business was done on the basis of exchange or barter. Ginseng came nearer taking the place of money among the early settlers of Pennsylvania and of West Virginia than any other article. Up to about 1787 it was a medium of exchange in use by all, more or less, but a sudden collapse of the Chinese market, in 1788, let the bottom out of it. In the beginning of Indiana's history peltries, and especially coon skins, were the most common medium of exchange. I have authority for saying that the coon skin "was often forced upon tax collectors and post-masters in payment of the law's demands". But the coon-skin era was about over when the first State Seminary professor was elected. His salary it was expected would be paid in good silver coins, mostly Spanish, brought in by the White river flat-boatmen—fips, bits, pistareens, quarters, half-dollars, and maybe a few dollars. Perhaps a part in "sharp shins",—that is, triangular pieces cut out of the larger coins by the country blacksmiths, and circulating among the people; but the greater part of the salary was to be paid in a paper currency, not much less fluctuating in value, if any, than a coon-skin currency would have been.

But there was another salary paid to the professor, which it was not pretended was to be in money, true or false. The Presbyterian congregation of Bloomington engaged him at least a part of his time to preach for them at \$150 per year, to be paid in "articles of trade". That meant the same as the Methodist circuit rider's "dicker"—corn, bacon, beef, venison, butter, potatoes, leather, feathers, buckwheat flour, labor, anything the subscriber had to give, and some things the preacher could not use. At this very time, and for a good many years thereafter, the schoolmasters of

Indiana were quite generally paid, in part at least, in articles of traffic. Ah! the stuff that has been doled out to the old Indiana schoolmasters! When I read—and remember, too,—how most of them would thrash their scholars; how others would sleep during school hours; how one played the fiddle between recitations “for his own amusement”, how another kept his bottle hid in a hollow stump hard by the schoolhouse; and how still another made his scholars work in his clearing during the noon hour,—I have it in my heart to forgive them, when I further remember the compensation many of them received. Think of it! One dollar, or one and one-half, per scholar per quarter, and “board around”,—one-half and sometimes more to be paid in such articles of trade as the patrons could spare. I read of an old-time schoolmaster who took part of his pay in dried pumpkin, and of another in whiskey. Corn, flour, buckwheat flour, bacon, turnips, and so on, were constantly dealt out as the price of learning. Young as I am, I can remember seeing a dripping side of bacon go out of my mother’s smokehouse to the master who had been doing his utmost to *lick* me into shape during the preceding winter.

I have heard it said that the Fathers were overhasty in setting the machinery of the State Seminary in motion. “Oh, if they had only waited till the land was worth \$30 or \$40 an acre, then sold it, what a munificent endowment it would have made!” was an exclamation I once heard. True enough. But what would have become of Indiana in the meantime? Never in the history of the state was there such a pressing demand for a school of higher learning than when the trustees determined to open the doors of the State Seminary. The majority were doubtless unconscious of that demand. The people of the district who thought the sound-bodied man that applied for their school “a lazy, trifling, good-for-nothing, who wanted to make his living without work”, preferring to him a lame school-teacher or one who was disabled by fits for manual labor, were no doubt on the side of that majority. But there was a minority that stood out in the light—a minority that saw and heard and knew and acted; and let us thank God for it, and not carp at them nor criticize them because they may not have done away back there the thing we might have done away up here.

The time had now come for the opening of the State Seminary. What, if any, steps were taken to advertise the general public of the new school is not now known. There were not less than twelve or fifteen newspapers printed in the state at the time, and it is not

unreasonable to suppose that notice was given thru the columns of some or all of them.⁴

Be this as it may, on "the first day of May, at half-past nine a.m. *anno domini* 1824", the State Seminary doors were opened for the reception of students. On this May morning of the last year of the first quarter of a century now nearing its close, a fire was kindled upon this altar of learning that has never been extinguished. During all the years that have come and gone since that May Day opening, every school day of each year has stood witness to the coming together of professors and students, and to recitation and drill in the classroom.

That opening morning a heterogeneous crowd of youthful candidates for seminary learning greeted the young professor at the "new college", as the building seems to have been called from the beginning. It is remembered that many of the village school-master's boys forsook his unpretentious school that May Day, and with spelling-book and reader and ink-bottle and copy-book applied for admission at the "new college". But it was Greek and Latin only at the "college", and the boys with the spelling-books and readers and ink-bottles and copy-books soon returned to the drowsy hum of lessons in the town schoolhouse.

Ten boys were left in the Seminary after the weeding out process was over, on that May morning, to begin at the beginning of a preparatory course of the Greek and Latin languages. These, the first to drink at the fountain of learning opened by the bounty of the state, were Findlay Dodds, James F. Dodds, Aaron Furgeson, Hamilton Stockwell, John Todd, Michael Hummer, Samuel C. Dunn, James W. Dunn, James A. Maxwell, and Joseph A. Wright.

An interest attaches to these pioneers greater than any who have come after them. They were the first students of Indiana's school to feel the pangs of failure and to know the joys of success. They were the first to dream dreams of those lofty achievements among men that inflame the youthful mind with a desire to excel. What of the ten? All lived to reach manhood's prime, and a few went down into a ripe old age. All are now dead. Each in his chosen sphere rendered faithful and efficient service to society. Findlay Dodds was a tanner. James F. Dodds, Aaron Furgeson, and Hamilton Stockwell were physicians. John Todd and Michael Hummer were ministers of the gospel. Samuel C. Dunn was first

⁴In *The New Purchase* it is said that notice of "the necessary books . . . was given at meeting, and in several other ways, for the last four weeks" (ch. xlii).

a merchant, next followed railroading, then banking, and in his old age held public office by the suffrages of his neighbors. James Dunn, James A. Maxwell, Joseph A. Wright were lawyers,—one of whom, Joseph A. Wright, attained the honorable position of governor of Indiana, and subsequently served his country faithfully and well in a diplomatic position in a foreign country.

For a period of three years—from 1824 to 1827—Baynard R. Hall was the sole professor in the Indiana Seminary. No catalogs were printed during the Seminary period, and the trustees' records have been destroyed by fire; and our knowledge of the history of this period is limited by that much. In 1828 a legislative resolution called out a report from Dr. Maxwell which, fortunately for this history, has been preserved in the *House Journal* for that year. From that report we learn that thirteen students attended the Seminary the first year; fifteen the second; twenty-one the third. The professor's salary of \$250, as originally made, was continued at that sum for three and a half years; during which period he preached to the Presbyterian church of this town, for which service they paid him "\$150 in articles of trade". At the end of the three and a half years, the trustees forbade the preaching, and advanced his salary to \$400.

It was resolved by the board, sometime during the second year, "that, in addition to the Greek and Latin languages heretofore taught in the State Seminary, there shall be taught by the said Hall . . . English Grammar, Logic, Rhetoric, Geography, Moral and Natural Philosophy, and Euclid's Elements of Geometry". But for some reason now unknown, it seems the requirement was not complied with; for in Dr. Maxwell's report, above referred to, occur these words: "During the first three years one teacher only was employed by the trustees, and the Greek and Latin languages alone were taught during that time." As the third academic year drew to its close, it became evident that the advancement of the old students required the introduction of other branches of learning than Greek and Latin. More than half of those enrolled contemplated the full collegiate course, and preparation must be made for that, else there would be an hegira to other schools. So the trustees resolved to elect a professor of mathematics, pure and applied.

If there was a dearth of candidates when the first professor was elected, it was not to be so when it came to the election of the second. What notice was given of the proposed election is not known; but some notice must have been given that, at the May meeting of the board for 1827, a mathematics professor would be elected, for one

candidate dated his letter of notification to the board "April 20", which was twenty days before the election was held. Much uncertainty seems to have existed in the minds of some of the applicants for the place as to the real work to be required of the new professor, and the qualifications requisite for doing it. One of the candidates informed the board that he was "educated in England, and would accept the situation at a salary of \$250 and find his own family". Another hinted that while he might be a little rusty he was confident that by hard study he could easily keep ahead of his students.

The names of only a few of the candidates have come down to us. Mr. Beverly W. James, the village schoolmaster whose scholars forsook him for the "new college" on that May Day morning of three years before, gave notice that he would accept the place if tendered. And so did a young lawyer, then recently come to the state, Delana E. Eccles, who subsequently, after serving for many years on the circuit bench, was for a time professor of law in the University. Another applicant was a "Mr. Pharis", the Rev. James Faris of South Carolina, who about that time was organizing a Reformed Presbyterian church in the neighborhood.

One more name remains to be mentioned—John M. Harney's, the successful applicant's. Mr. Harney was a young man, fresh from the Miami University, where he had recently graduated. In truth he came from Oxford to Bloomington walking all the way, accompanied by a young friend, Robert Caldwell, who subsequently achieved reputation as chief of the United States Marine Corps, with whom he had formed a college friendship. No one knows the roads these youthful knights in pursuit of a college professorship traveled; but as Harney had relatives living in the neighborhood of Greensburg, whom he is remembered to have visited a few years later, it is reasonable to suppose that he traveled the road leading from Oxford to Greensburg; and if so, the young men came by the way of Columbus, a town lately planted on the Driftwood, and thence by the way of the new road thru the wilderness of Brown county.

It was in the spring of the year, a season when the roads were always bad in the new state of Indiana. What a toilsome journey theirs must have been, and how the discomforts must have multiplied on the way. The weather was warm, and they could hardly have ended their journey without encountering one or more showers of rain. But they reached Bloomington in time for the election. It is related of them that shortly before attaining their journey's end,—

wearied, footsore, and travel stained,—they halted at a creek, bathed, and washed their shirts and dried them in the sun; and were enabled to make their way into Bloomington in clean linen.

On his arrival, Harney addressed a letter to the trustees which was so different in its tone and spirit from any of the other letters before them, judging from the few that have survived the ravages of time, that it must have engaged their serious attention at once. Time has dealt hardly by this letter, but enough of it remains for us to see that a man possessed of a courageous, self-reliant, self-confident spirit composed it. And more than that, its author had ideas concerning the branches of learning that ought to be taught from the chair to which he aspired; and, next to money, ideas were what the trustees most wanted to enable them to carry on the work of the Seminary.

As the day of the election drew nigh, a thunderstorm uprose in the Bloomington sky. Want of time forbids our stopping to consider the causes that led to its appearance at this particular juncture. Ever since that May Day, when the Bloomington youth with spelling-book and reader were forbidden to enroll their names as students in the State Seminary, that cloud had been gathering. It took the election of a mathematics professor to set the elements in commotion and bring the storm to a head. There were rival candidates in the field, most of whom had a personal following. Each set of partisans backed up its man, and it would be strange if some partisans did not talk down the others. Harney, being a stranger, was without backers; nevertheless the trustees had not been long in session in the Seminary building, when it was made apparent that Harney was their favorite. The news flew to the town, and at once an uproar began. The late partisans of the different candidates coalesced and made common cause. Harney was understood to be a Presbyterian, and at once the cry of sectarianism arose. Next followed the old and, in that day, all-potent shout of Aristocrat! It was evident to the malcontents that a crisis had arisen; and something, in their judgment, must be done and done quickly to save the Seminary to the people. General Jacob B. Lowe, the clerk of the circuit court and a politician of that period, is found at the head of a deputation who go to remonstrate with the trustees. As they go, some one huzzas, and the trustees hear and know what it means. News seems to have flown as rapidly from the town to the Seminary as from the Seminary to the town. At once the trustees proceed to the election of a professor; and lo! John M. Harney is elected. Barely is this done, when the burly form of General Lowe enters

the door, with his friends at his heels. Patiently the trustees listen to his speech, after which the diplomatic Dr. Maxwell makes a soothing speech in reply, and the thunder-cloud disappears.

Harney entered at once upon his duties, at a salary of \$250 per year. At the end of six months, on the recommendation of the Board of Visitors, the salaries of the two professors were raised to \$400 each.

The increase in students following the election of the new professor justified the action of the board in bringing him in. During the spring and summer term of 1827, the number in attendance was twenty-six. At the opening of the following fall and winter session, "about forty students" were present, which number so materially increased during the term that Dr. Maxwell wrote, in January, "there is a probability there will be fifty or sixty students" in attendance before the close of the session.

Would that we knew more than we do of the students and of student life at the Indiana State Seminary! All the students, as far as I know, came from Indiana homes. Nearly or quite every county on the border, and a good many inland counties, were represented during the period. And what toilsome journeys most of the boys had to make to reach here! Young Austin Shipp of Johnson county walked. He went by way of Columbus, a more direct road not yet having been cut out. It is in memory still how matrons from cabin doors kindly greeted the lad who passed by on his way to college, with his bundle swung on a stick over his shoulder. College! None of those old Seminary boys went to a seminary. No, indeed! With them it was *college* from the start.

Doubtless there were others who went to "college" on foot in those early days; but the majority traveled on horseback, most of whom would "ride and tie". This was a favorite mode of travel, and was well adapted to the necessities of the college student. By it two would travel with one horse, and "ride and tie" time about; which means that one would ride in advance a given distance, and tie the horse and walk on, leaving his companion to come up to the horse and mount and ride on past the foot-man a proper distance, when he in turn would dismount, tie, and walk on.

I am glad to be able to present to you the late General Dunn's account of his coming to the State Seminary:

A few days before the opening of the session, May first, 1826, if you had been here to look, you might have seen emerging from the green woods north of Bloomington, a man on horseback; and as his horse veered from one side of the road to another, to avoid a stump or mudhole, you might have seen that there was riding

behind the man on the same horse a little speck of a boy about eleven years of age. They were father and son, but the son was so small that it was considered a useless waste of horse-power to furnish him a horse all to himself for this journey. They had thus ridden all the way from Crawfordsville, then a two days' journey on horseback. Between Crawfordsville and Greencastle, it was then an almost unbroken wilderness, and these travelers had made part of their way through the woods along an Indian trail. The boy enjoyed the ride, for sweet was the breath of spring in the green wildwoods, the aroma of the spice-bush perfumed the air, and the bloom of the dogwood and the redbud with blended beauty adorned the green-leafed forest.

That little boy was my father in the sense of the saying the boy is the father of the man. In a few days, he (I) was admitted as a student in the State Seminary, then regarded as the highest and best school in the state; was introduced to Ross's *Latin Grammar*, and soon was nearly worrying the life out of poor "*Stella*, a star", in putting her through the cases of the first declension of nouns.

According to my recollection there were but nine students at the Seminary that session, of whom I was the smallest and Dr. Maxwell [James Darwin] was the youngest. Perhaps I might as well say that I was a student here in the Seminary and in the College six and a half years, and was the first graduate of Indiana who commenced, continued, and completed his entire preparatory and collegiate course in this institution. At the first organization of the students into regular college classes, I constituted the sophomore class; and for an entire session I had a bench all to myself at college prayers, by virtue of my being all the sophomore class.

How did the students get their trunks here? They had no trunks. Those who walked carried their clothes with them, tied up in a handkerchief. In 1835 Robert Dulaney of Clark county, Illinois, attended college here. He says:

I went by the way of Terre Haute, Bowling Green, and Spencer to Bloomington, a distance of about eighty miles. A boy went along to take the horse back. There were two terms a year, and I carried all my clothes necessary for a term in saddle bags. This was the practice of all who went to college on horseback in that day.

The students, when they reached Bloomington in those far-off primitive times, found rooms and board with the citizens of the town, in much the same manner as students have done ever since. In a majority of the counties represented here, old forts, built as a protection against the Indians during the troublesome times of 1811 to 1814, were still standing, and were, as we may well suppose, objects of romantic interest to the youth of the land. What more natural than to designate a house, where two or more roomed, a "fort"? Hawthorne tells us that the grim Puritan children played at hanging witches and making Indian campaigns. Our own Seminary boys brought with them the memory of border-war times in

Indiana, and lived in "forts", and (what is more to the purpose) the practice thus inaugurated has been handed down unbroken to the present.

The fame of Indiana Seminary was spreading abroad. Its professors were men of learning, full of zeal, and greatly beloved by their students. It had no competition within the state, and it was receiving a liberal patronage for the times. Its students were beginning to assume college airs. They had organized a literary society—the Henodelphisterian Society, they called it—which was so exceedingly classical that every student in joining was compelled while within its hall to take, in lieu of his own plain name, one once current in the streets of Greece or Rome. Here young Pericles sat down with Solon and Cicero and Ajax and Timoleon, and began the serious business of essay-reading, declamation, and debating. And at stated intervals these young classicists gave public exhibitions, wherein they displayed their literary skill. The first one of these "feasts of reason" was in the new brick courthouse and has the merit of having been embalmed in *The New Purchase*, Professor Hall's book. McKee Dunn was the "little speck of a boy" in that exhibition, and delighted the audience with—

You'd scarce expect one of my age
To speak in public on the stage.

General Dunn, in a conversation not long before his death, paid a glowing tribute to the memory of Professor Hall. "Little as I was", said he, "Hall took the utmost pains to drill me well in my part, and I got hints from him which have stood me in good turn all through my life."

But we must hasten on. The end of the Seminary is close at hand. On November 1, 1827, a Board of Visitors made its appearance on the Seminary grounds. Two of those visitors were prominent men in their day, one being no less a personage than James B. Ray, the governor of the state, and the other James Scott, a judge of the supreme court. The law required a good deal at the hands of the board. It was made their duty to examine each student in all branches he had gone over, and after everything else was done, one of the board was to make a speech to the boys. The law seems to have been obeyed to the letter, and the visitors went away charmed with what they had seen and heard. The governor made his report thru his annual message. Judge Scott wrote the report for the Board of Visitors, and Dr. Maxwell followed by a report as president of the Board of Trustees. Message and reports all made

proclamation that the time had come when the Seminary should be raised to the dignity of a college.

A bill was prepared having that end in view; and notwithstanding that a serious effort was made to move the institution to another town, it was finally passed and signed by the governor. Thus by legislative enactment, on January 24, 1828, the Indiana State Seminary was merged in the Indiana College.

II. FROM SEMINARY TO COLLEGE (1826-29)¹

IN THE BEGINNING the Indiana Fathers had no thought of a state seminary. Indeed they had no thought of a state college. Nothing short of a university was to satisfy them, for in euphonious phrase they declared in the organic law of 1816 for a "system of education ascending in regular gradation from township schools to a State University".

But the State Seminary came first. That was inevitable. The time had not yet come in America when universities could be flung out upon the world, strong and full grown, by a constitutional or legislative enactment. The Seminary was a makeshift. It was so regarded at the time of the passage of the act providing for it, and it never ceased to be so regarded by its founders and by those who had it in charge. The act of incorporation was notably defective. In the very next legislature that met after the act became a law, the educational committee of the lower branch called public attention to the "materially defective" nature of this law, and at the same time reminded the legislators of the state that "the means afforded, with proper management, could not fail to make the University of the State as rich in funds as any in the Union".

The General Assembly that passed the act incorporating the State Seminary raised a special committee whose duty it was to prepare and report a general state educational plan to the next assembly. This committee reported early in December, 1821, covering the whole ground, and so much of their report as touches upon the subject of a state institution of learning belongs to this history. It is of interest not only because it proves how surely the promoters of higher education in Indiana still looked to the establishment of a university as the culmination of the Indiana educational system, but also, and in a still larger degree, in that it gives us a clue to what the men of that day had in mind when they spoke of a university:

¹Read by Judge Banta as the annual Foundation Day address, in the Old College, January 20, 1890.

and furthermore, what they regarded as an adequate endowment for their ideal institution.

Daniel J. Caswell, an old-time lawyer and something of a politician who resided at Brookville, in Franklin county, was chairman of the committee and doubtless inspired and wrote the report. He was a lawyer of more than ordinary ability and was a noted special pleader. There are those who claim that he was an eastern man and a scholarly one. Be this as it may, the language of the report "bewrayeth" the lawyer. It spake the shibboleth of the bar. Its "then and in that case" was a phrase much loved by the special pleaders of that day—a phrase that even yet may be heard sounding as an echo from the dead past in the courtrooms of the state.

The committee expressed a belief that the Seminary lands could be made to realize such an amount of funds as, "with some assistance" would "enable the state to occupy in a literary point of view a highly respectable standing"; and to that end they recommended that a university be established to be known by the name of "the University of Indiana".

The committee was not only hopeful as to the future, but it ingeniously manipulated the figures so as to show good grounds for that state of hopefulness. If the funds of the institution should be "auspiciously managed", "then and in that case", wrote special pleader Caswell, the University of Indiana "with some assistance" (from the legislature, presumably) lay within their grasp.

But suppose the legislature to be unwilling to burden the public with any part of that support, what then? The most expedient plan, as introductory to a university, "will be to establish a college first", say they. The report continues:

In that case to make it respectable or indeed useful, it is respectfully submitted that it will be necessary to place a president at the head of it whose duty it shall be, besides exercising a general superintendency, to participate personally in giving instruction to the highest or first class in college in logic, metaphysics, moral philosophy, and criticism.

They recommended further, "a professor of mathematics and natural philosophy"; a professor of "geography, ancient and modern, and of astronomy"; and one of "the Latin, Greek, and Hebrew languages, with one or more assistants or tutors".

This is the first that is heard of a state college in Indiana, but this college was to be a temporary expedient—a stepping-stone to the more pretentious university promised by the constitution of 1816, the very university that the committee evidently had very much at

heart. Found the college *first*, and as thus outlined, and then as the available funds increased add to it a professor of theology, a professor of law, and a medical school; and lo! you have the University the Fathers had in mind.

The General Assembly, however, did not concur in the committee's recommendations. Their report was referred to another committee, and so much as is outlined here was never again heard of. The people of Indiana were not yet ready to attempt the educational scheme proposed, and long before they were ready, the committee's plan was slumbering in the archives of the state. Looking forward to the end of a period of six years, they saw with the aid of a little arithmetical computation a fund augmented by sales of land and interest to over \$260,000! What better endowment could any university want! The sixth year expired in December, 1827, at which time the best that Governor Ray, in his annual message, could say was, that the Seminary lands up to that time sold in Monroe and Gibson counties "brought a fair price, producing near \$30,000".²

"Introductory to an university will be to establish a college", said the committee, and the event proved the truthfulness of the prediction. The college was established, but not on the basis of a mistake in ciphering. It came because there was a demand for it, and it came ahead of any endowment worthy of the name.

To James B. Ray, the governor of Indiana from 1825 to 1831, a lasting debt of gratitude is owing from the friends of the Indiana University. He was ever the outspoken friend of the State Seminary. In all his annual messages he pressed its claims upon the legislature, and he was the first governor to suggest the propriety of giving it aid from the public treasury. So zealous was he in his friendship, that to advance its interests he at one time left his gubernatorial duties at the capitol and came to Bloomington, that he might assist in an examination of its students and thus better judge of its real value to the state. Governor Ray was in some respects ahead of his times. In the language of one of his biographers, "He saw more plainly than any other man of his day the future of the state in which he lived." No man in the state saw more clearly than he how imperatively necessary it was to the public welfare that the State Seminary should receive the fostering care of the state. In his annual message of December 4, 1826, he presses upon the legislative attention in strong and earnest language the claims of the institution and the utility that would ensue to the

²This was a mistake of the printer or of the governor.—D. D. Banta.

state from a liberal cultivation of letters. Had it been left to him, there cannot be much doubt that the institution would have been endowed with a liberality far in advance of the ideas generally prevalent in his day.

The governor's recommendations were not wholly without effect. Other voices than his, speaking the name of the State Seminary, were heard in the halls of legislation; but these were voices crying down what he sought to build up. There were those who saw in the teaching of Greek and Latin to the exclusion of spelling and reading an arraying of the rich against the poor; and again there were those who saw in the employment of two Presbyterian professors the fostering of one church to the undoing of all the others. The student of those times must not underestimate the potency of two watchwords then prevalent—aristocracy and sectarianism. While the politicians kept the poverty-stricken people of Indiana in a constant state of unrest over the encroachments of an ideal money power, the sectaries were crying out from their watch towers against the supposed encroachments of each other. This is no rhetorical figure. The theological professorship inevitable in the University of Indiana, when that University should come, according to the prevailing opinion of the times, would be a prize well worth a life and death struggle, and the sooner (it was believed) that struggle was begun the better.

A painstaking investigation into the methods in vogue in the Indiana Seminary, and for that matter in the Indiana College afterwards, fails to disclose any teachings or practices that could have been objectionable to the straitest of the sects, and the composition of the various boards of trustees (being made up as they usually were of men of all denominations) utterly forbids the thought that such was the case. But no matter: the possession of the theological professorship when it should come, and the menace of two Presbyterian professors in charge, made war inevitable—a war that went on until, after many years, a church dignitary could point with pride to the fact that a governor had been elected in Indiana by the amen-corner of his church.

Let no one misapprehend me. I am not assailing anybody—I am not defending anybody. I give the facts as I find them. They are a part of the history of the times. The action of every party concerned in the State College controversy was the result of conditions for the existence of which the men of that day were in no wise responsible. The battle was inevitable, and in the long run has proved a blessing to the state.

Between the governor's commendations on the one hand and the warnings against the asserted evil practices of the classical aristocrats and sectaries on the other, the General Assembly passed a law providing for a Board of Visitors consisting of twenty-four members, any five of whom when met in Bloomington on the Thursday preceding the commencement of the supreme court should constitute a quorum. It was made the duty of this board, among other things, to examine the records kept by the Board of Trustees, the rules adopted for the government of the students, and to examine the students themselves as to their progress in their various studies.

No doubt it was the legislative hope that this committee would either be able to uncover something pernicious to sound morality and good government or be able to give such positive assurances of the nonexistence of anything objectionable as should allay the mistrust of the people. At the appointed time a quorum of the members of the visiting board met, of whom one was the governor. Another was James Scott, a judge of the supreme court. The examinations of records, of rules, of courses of study, and of students, was had as required by law, and the Governor's next message and the committee's report, the latter written by Judge Scott, both bore ample testimony to the skill of the teachers, the proficiency of the scholars, the administrative wisdom of the trustees, and the nonexistence of aristocratical and sectarian influences. And both recommended that collegiate powers be granted to the institution at Bloomington.

Could not this be made a solution of the whole difficulty? In the new organic act a board of trustees could be made up so that all the contending factions would be fully represented and the presence of one prove a check upon the other.

Be this as it may, on the eighth day after the visiting board's report was read, Isaac Howk, the member from Clark and the chairman of the committee on education, reported a bill to establish "the Indiana College" at Bloomington.

It would not be of any public interest to follow the bill thru its various vicissitudes until it became a law. Two incidents, and only two, are now known to have been connected with its passage that may profitably engage the attention of the hearer. One is a report made by Dr. David H. Maxwell, the president of the Board of Trustees, in response to a resolution offered in the House by Mr. Stapp of Jefferson, from which we learn that the fall term of the then present academic year had opened with an attendance of forty students, which attendance would probably be increased to

fifty during the term, and which increase, the good doctor very adroitly suggested, would be "owing to the prospect of the Seminary obtaining collegiate powers". "Seven or eight young men", the report goes on to say, "are now at Oxford, Ohio, who before going called at the Seminary at Bloomington, but finding everything involved in uncertainty left our own state to obtain an education in another."

The other incident to which reference is made was an outside movement of a threatening nature, but which so far as now known had no connection with the other troubles. A petition was presented signed by certain citizens of Indianapolis praying the legislature to memorialize Congress on the subject of a grant of land to establish a seminary of learning at the capital. The success of this movement meant death to Bloomington, and its projectors, afraid of the chairman of the Senate's educational committee who happened to be the president of the State Seminary's Board of Trustees (Dr. Maxwell), took it to the House, where, after it was read, it was referred to Mr. Howk's committee. On the same day that Dr. Maxwell's report as to the condition of the Seminary was read to the House, the Indianapolis scheme was strangled by an unfavorable report from Mr. Howk's committee. After this he called up his College bill, and it was passed without a call of the vote; and in due time it was also passed by the Senate. On January 24, 1828, just eight years and four days after the incorporation of the State Seminary, and two years, eight months, and twenty-three days after it was opened to students, Governor Ray signed the bill. Thus the Seminary passed out of existence and the Indiana College took its place.

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Excepting its Boards of Trustees and Visitors, the College inherited all there was of the Seminary—its students, its buildings, its reputation, its poverty, its professors, its methods, and even the contention of its professed friends and the malice of its enemies, not to mention the venom of the demagogues who were equally ready to curry favor with the populace by making empty speeches in praise of education in the abstract or by shouting with the mob in the hue and cry of aristocrat and sectarianism when the Seminary happened to be the theme.

The act of incorporation established a college professedly for the "education of youth in the American, learned, and foreign languages, the useful arts, sciences, and literature". Fifteen trustees were provided for and named in the act, eight of whom (Edward Borland, Samuel Dodds, Leroy Mayfield, Jonathan Nichols, James Blair,

David H. Maxwell, William Bannister, and William Lowe) were of Monroe county. The remaining seven were distributed as follows: George H. Dunn, of Dearborn county; Christopher Harrison, of Washington; Seth M. Leavenworth, of Crawford; John Law, of Knox; Williamson Dunn, of Montgomery; Ovid Butler, of Shelby; and Bethuel F. Morris, of Marion.

It is not too much to say that the act establishing the Indiana College was skilfully and understandingly drawn. Of the three organic acts that have from time to time been passed for the government of this institution, it is by all odds the most lawyer-like one. We may not be quite sure what the author of the act was driving at where he makes the preamble to say that the College is established "for the education of the youth in the American . . . languages"; but there is no mistaking him nor the spirit of the hour when he provides that no teacher shall be required by the board to "profess any religious opinions" and that "no student shall be denied admission or refused any of the privileges, honors, or degrees of the College on account of the religious opinions he may entertain, nor shall any sectarian tenets or principles be taught, by any president, professor, tutor, or instructor."

Having provided against what were supposed to be the wiles of the time, the act in clear and exact language set forth the functions of the institution, and fixed the powers, rights, and duties of all connected with it. It outlined the typical American college of that day—the college of arts and sciences—the college especially ordained to give general and even culture in all the departments of polite learning. It came at a time, too, when most needed in Indiana; and how well it served the purpose of the state that called it into being, its history amply shows.

Having thus far briefly referred to the causes that led to the creation of the Indiana College, and to the legal act of creation itself, let us here stop and take a look at the surroundings.

Lifting our eyes to a horizon bounded by state lines, we find that in spite of the poverty of the pioneer settlers and the sickness and hardships incident to the settlement of a densely wooded country, concerning which something was said from this platform one year ago, there has been a marked growth and change between the years of the founding of the Seminary and of the College. The population of the state has risen from 147,000 in 1820 to not less than 300,000 in 1828. Twenty-two new counties have been added to the map of the state, the years of organization and the names of which

will indicate to one somewhat acquainted with the geography and history of the state the progress and course of settlement. In 1821 Decatur, Greene, Henry, Parke, and Union counties were organized; in 1822 Marion, Putnam, Rush, and Shelby; in 1823 Johnson, Hamilton, Madison, and Montgomery; in 1824 Allen, Hendricks, and Vermilion; in 1825 Clay; in 1826 Fountain and Tippecanoe; in 1827 Warren; and in 1828 Carroll and Hancock.³

No assessment of property for revenue was made till nine years after the act organizing Indiana College became a law, revenue being raised mainly by taxes laid on land and polls; but while in 1820 the amount secured from this source was \$17,000, in 1828 it had amounted to something over \$43,000.

All the state from the headwaters of the Tippecanoe river southward had been cleared of Indian titles, save the "Miami national reserve" and a few other "reserves", insignificant in area; and in the same year that the College was chartered, by a treaty held at the Carey Mission, the Indian title was extinguished to fully a third of all the land north of the Tippecanoe.

The United States surveyors with compass and chain had run the lines and established the corners as far north as where the Wabash extends its course from the east to the west, a distance of nearly forty miles thru the twenty-seventh tier of townships.

The year that the Seminary was chartered, the New Purchase, comprising an extensive region bordering on the north branch of White river and its tributaries, was first opened to the pioneer settlers; and now, in the year of the chartering of the College, all the state from the Wabash southward, save the "reservations", was opened to movers who were thronging in in search of homes.

The statutes of the state during these early years bear indubitable evidence of the solicitude of the public men of the state as well as of the people in general for the cause of education. In 1824 "an act to incorporate congressional townships and provide for public schools therein" was passed, which if not followed by results that were satisfactory to the friends of education, cannot be overlooked altogether by him who would know something of the educational history of the times. There were too many obstacles in the way for the establishing of an effective school system in that early day, but the Fathers planned better than they knew in providing thus early for an accumulative school fund which has grown to be larger, the

³A full list showing the dates of organization of the counties of Indiana is given by Dr. Ernest V. Shockley, '09, in an article entitled "County Seats and County-seat Wars in Indiana" (*Indiana Magazine of History*, March, 1914).

state superintendents proudly tell us, by more than two millions of dollars than the common school fund of any other state.

A system of county seminaries was early provided for, which, if it proved a failure in the long run, nevertheless is highly suggestive of the laudable aspirations of the time. In many counties suitable buildings were erected, and in some schools were maintained whose influence for good proved a power in the state.

Up to 1828 nineteen private academies, seminaries, and grammar schools had been chartered, and all, most probably, were opened for the reception of students. In most if not all of these a fairly good English education could be had, and in some a classical in addition.

The tendency of the legislation of the state was to encourage the dissemination of knowledge. It came to be a sort of fashion of the times, both in and out of the legislative halls, to view with a friendly eye all educational schemes—a fashion that happily for the state has not yet gone out of vogue.

During these early years it was made the rule to confer upon each new county, in the act incorporating it, the power to organize and maintain a public library—a power of which most if not all the counties availed themselves. Most of those old libraries have long since been scattered, but their catalogs of books, now and then to be found on the mildewed pages of long laid aside records, show their shelves to have been filled with the standard literature of the day.

In 1824 steps were taken by the Indiana bar looking to the founding of a state law library, and in the following year the Indiana State Library was founded and an annual appropriation of \$30 made with which to buy new books, and a special one of \$50 with which to pay for the rebinding of certain old books then on hand.

In this necessarily brief and partial review of the educational forces at work in Indiana at the time of the chartering of the College, let us not overlook the fact that the press had come in along with the vanguard of the movers. As early as 1804 Elihu Stout had packed press and types on horseback from central Kentucky to Vincennes, where he at once founded the first newspaper printed within the Indiana Territory. In 1819 John A. Scott packed a Ramage press from Philadelphia over the mountains to the head of river navigation, whence he easily descended to Indiana and began the publication of a weekly newspaper in the town of Brookville. As the population of the state increased, the printing presses multiplied, and by the time the College was chartered there were no less

than twenty weekly newspapers issued between the Big Miami and the Wabash.⁴

One of these was a paper founded in Bloomington as early as 1826 by Jesse Brandon. He and his brother were the second Indiana state printers, and he brought to this town the press on which was printed the acts of the General Assembly and other state documents for many years, which press was here as late as 1854. And so was the ex-state printer, the ghost of his former self, an aged, lean, and frail bachelor who, to keep himself warm during the hard winters we sometimes had "before the war", had a curious habit of sleeping between two smooth sticks of cord-wood thoroly heated on a drum-stove.

But the greatest of all the educational forces at work in those primitive days was the country school, where "licken and larnen" jogged along hand in hand in the good old way. I say greatest, because it was in the old log schoolhouses that the rank and file of the youth of the new state were taught the elements of book knowledge.

In this connection we cannot afford to ignore the one place in the state where was to be seen a great light. It was at New Harmony, in Posey county on the Wabash. There Robert Owen, a canny Scotchman, having succeeded by purchase to the possessions of the Rappites, had begun his socialistic experiment in 1825, the very year the State Seminary was opened; and altho before the first regular college classes were formed in Indiana College the sanguine reformer saw that his experiment was doomed to failure, nevertheless New Harmony was already radiant with scientific thought and work. It is a story that reads like enchantment, a story of the Owens—father and three sons, each of the latter to become prominently identified with the history of the state. David Dale Owen, the eldest, early in 1828 established a geological laboratory in New Harmony and ultimately was appointed United States geologist for the Northwest, and served at one time or another as state geologist for three states, Indiana, Kentucky, and Arkansas. New Harmony was headquarters for all his geological surveys. Robert Dale Owen, literarian and politician, began his career in Indiana in the same year as editor of the *New Harmony Gazette* and in 1827 published *Pocahontas—A Drama*, the first distinctively literary work by an Indiana author. For over thirty years he was closely identified with the political and legislative

⁴Dr. Logan Esarey, '05, has practically completed for the Indiana Historical Survey a volume on the history of the press in Indiana.

history of the state. He was a member of the commission that framed the Indiana code of 1852—a code remarkable for its literary excellence and for the radical changes made in the law as to the property rights of married women, for both of which he is entitled to credit beyond any other man.

There were others at New Harmony who were already (in 1828) renowned or were to become renowned. There was Frances Wright, who in that year delivered her first public address in New Harmony—the first public address, I have no doubt, given in the state by a woman, if not the first in the Northwest. Thomas Say, the eminent naturalist from Philadelphia, was also there busily engaged on his afterwards justly celebrated work on conchology, and publishing from time to time learned papers on entomology, which have since been given to the world in two octavo volumes. William Maclure, geologist and publicist, was there also. He was one of the founders of the Philadelphia Academy of Sciences, and in after years, with a benevolence unexampled in Indiana history, gave a large fortune to the establishing of libraries in every county of the state for the benefit of the common people. And Lesseur, the French naturalist, who had been among the earliest to study the strange forms of animal life in New Holland (near Australia), was at this very time “working on the description and figures of the Wabash fishes” with headquarters at New Harmony. And so, too, was Amphlett there, writing the text to accompany the publication of Michaux’s *Sylvia Americana*. Dr. Richard Owen⁵, who was yet in his teens, writes that “in 1828 and subsequently I saw him at this work.”

Others might be mentioned as residents of New Harmony in 1828, who by their scientific investigations added to the fame of the place. There was Joseph Neef, a former coadjutor of Pestalozzi, and an author of books on education. “He was at the head of the New Harmony Education Society.” And also Dr. Gerald Troost, a German geologist who subsequently made a geological survey of Tennessee, and became president of the Tennessee University.

What a community of workers to be sure! Their very presence made a university—an unchartered, unendowed world’s university! How very much darker all the rest of the state must have seemed by contrast with that New Harmony light.

Outside of the work of the Harmony folk, not a book had been written and published in the state excepting the laws and other

⁵The third son of Robert Owen; professor in Indiana University, 1863–79. Owen Hall commemorates his connection with the University. In 1913 his bust was placed in the Statehouse at Indianapolis by a committee of Confederate Veterans in recognition of his humane treatment of Confederate prisoners while serving as colonel of an Indiana regiment in charge of Camp Morton.

things published by public authority, and excepting now and then a political pamphlet. It was to be two years before John Finley was to write "The Hoosier's Nest", the earliest poem to survive to our times; and it was to be two years before Judge Blackford was to publish the first volume of his series of Blackford's Reports.

Let us turn to Bloomington. What of it? The population of Monroe county in 1828 was about 4,600⁶, and of Bloomington about 600. The town was still in the woods. Its few business houses were confined to the west side and the west half of the south side of the public square. Its one hundred or more residences occupied the other parts of the square or straggled in the rear. The courthouse was finished, and when not used for court purposes was locked against all intruders, save such as had a curious longing to know more of architecture than the ordinary log cabin taught. East of the row of dwellings on the east side of the square was an open common used by the county militia on training days and by any other citizens on any day when they happened to find it necessary to settle an argument by fist and skull. It was on that common that an ingenious Monroe county man—a very prince among the slick citizens of his day—soaped himself all over and went into win.

Bloomington was well connected by mail with all the prominent towns in the state, and its mail facilities were quite good for an interior town in 1828. Up to about 1836 it had but one mail a week, but that was quite regular save when the roads were very bad or the waters uncommonly high. Up to 1826 the weekly mail was carried on horseback by a "little old man" who announced his coming by a blast from his postman's horn. He came from Salem by the way of Sparks' Ferry on White river, and Fairfax on Salt creek. In that year the route was changed thru Bedford. If there was any other change for ten years my informants have forgotten it. I suspect there was; but in 1836 a tri-weekly mail came. It was brought by John and Samuel Orchard, who saw that the mail bags were sent three times a week over the long road between Indianapolis and Leavenworth on the Ohio river. During the season of dry weather they sent the bags by stage coaches, but in the winter and spring on horseback, save between Bloomington and Indianapolis. Over that part of the line the bags were often too heavy to go on horseback, and when so the fore wheels of a road wagon would be hitched to, the bags thrown on, and thus wheeled to their destination.

⁶Judge Banta appends here a footnote showing that he arrived at this figure by multiplying 921, the number of polls in 1828, by 5, the estimated ratio of persons to adult males.

In 1840 a tri-weekly branch line was opened up connecting Louisville with the Leavenworth route at Salem. Lateral lines were established from time to time, one from Bloomfield to Bloomington in 1836 or 1837, and one to Columbus a little later. In 1848 the long lines were broken up and a system of shorter ones established in lieu of them; and in 1853 the advent of the railroad in Bloomington put an end to the further carrying of the mail bags on horseback, on wheels, and in stage coaches.

But let us turn to the Indiana College itself; what of it on this January 24, 1828? Its endowment, as stated by Dr. Maxwell in his letter to Dr. Wylie announcing his election, was "nearly \$40,000" and brought in an income which he "estimated at something like \$2,000"; and from the report of the treasurer of state made about the same time it appears the unsold College lands were between seventeen and eighteen thousand acres, which it is supposed were worth as many dollars as there were acres.

There were two buildings, one built for a professor's residence, and the other a plain brick rectangular structure two stories high, containing six rooms, one of which was the chapel and another the Henodelphisterian Society's room, leaving four rooms for recitation purposes.

Now add the thirty-five students that Dr. Maxwell, in his letter to Dr. Wylie, says were in attendance, most of whom were in the preparatory department, and "none of whom except in one or two branches had advanced beyond the studies usually pursued in the freshman class", and we have the warp and woof of the Indiana College the first year of its existence.

It was without the veriest pretense of a library, and there was not the simplest article of apparatus connected with it.

Outside was the campus, containing ten acres, inclosed with a worm fence, and surrounded on at least three sides with walls of living trees. On the town side, the ax-men had been at work, but it was many years after 1828 before all the forest trees lining College avenue between the town and the College were cut down and destroyed.

The campus itself, however, was bare enough of tree and leaf. The pioneers were soldiers arrayed in hostility to the trees, and with such courage and persistence did they carry on the war that in less than the life of two generations of men the great forests of Indiana have been destroyed. As for the campus itself, they made short work of it. In the language of the times, they cleared it "smack, smooth, and clean", cutting off every tree save a very few in the

southeast corner, one or two of which still feebly hold out against the tramp and stamp of the lusty ball-players.⁷ But the stumps of the fallen trees, some charred and blackened by fire and some in Nature's own coat of brown or gray, still thickly stood all over the ground. And amidst these cumbering stumps, here and there, were doubtless to be seen even at this early time a few feeble transplanted bushes and shrubs. Certainly they were there a few years later. It was the rule of the pioneers to spare no green thing unless it was something that might by some possibility bear fruit or make a "gate post". "Let the sunlight in" said they, and so they built their cabins and schoolhouses, their meeting-houses and colleges, in the glare of the sunshine, and afterwards made feeble efforts towards ornamentation by transplanting black-locusts, horse-chestnuts, willows, or some other abomination to be found somewhere in our American forests.

The street leading from the College to the town was unpaved and the sidewalk was a footpath in clay. The first improved walk to the College, consisting of hewed logs strung end to end, was not yet laid down. Young Joseph G. McPheeters and George Washington Parke Custis, the purchasers of the logs and the promoters of that enterprise, were not yet students in the Indiana College.

Let us now pass to the organization of the College. On the first Monday of May, 1828, ten of the fifteen trustees met at the College in pursuance of the requirement of the law appointing them. Of these ten, eight were from Monroe county; another was George H. Dunn, from Dearborn, and the other was Seth M. Leavenworth, from Crawford. The first thing done was to organize by electing Dr. Maxwell president of the board, and Prindiwel H. Dorsey, secretary; after which the board proceeded at once to the election of a president of Indiana College. One name and one only was presented for the office of president, that of the Rev. Andrew Wylie, D.D., then the president of Washington College in western Pennsylvania, who receiving the vote of every member present was declared duly elected.

Dr. Wylie was a native of the county wherein was the college of which he was president—Washington county—where he was born on April 12, 1789. He was just turned into his thirty-seventh year at the time of his election. He was of Irish descent and up to his fifteenth year had lived the life of a farmer lad. He had then entered school in his county town of Washington, and on being

⁷When this address was written, altho the University was located on its present site, the athletic field was still on the Old College grounds.

prepared for the freshman class went to Jefferson College at the town of Canonsburg, seven miles from Washington, where at the age of twenty-one he graduated with the honors of his class. His scholarship and superior intellectual endowments engaging the attention of the Jefferson board of trustees, they at once gave him employment as a tutor, but in less than two years he was advanced at one bound from his tutorship to the presidency, a mark of confidence seldom paralleled in the history of American colleges. For seven years he continued at the head of his Alma Mater, when he was elected to the presidency of the neighboring institution, Washington College.

Washington and Jefferson were rivals and always had been, but an effort was now made looking to a consolidation; and Andrew Wylie, it was hoped, would be the agent thru whose influence this desirable end was to be brought about. The effort failing, he continued to occupy the Washington presidential chair, and was there in May, 1828, when Dr. Maxwell's letter reached him announcing his election to the presidency of the Indiana College.

It is evident that Dr. Wylie was not a candidate for the presidency of the new college of the new state of Indiana. In truth, there is no evidence tending to show that he had any knowledge that his name would be up for consideration in connection with that office. But there is evidence tending to show that the Washington presidency was growing irksome to him. Dr. Brown, whom he had succeeded as president of Washington, still lived in the town, and his presence was a standing menace to the Canonsburg Doctor. Letters written at the time show that Dr. Brown and his friends would have taken great pleasure in seeing Wylie go to another field.

How did the Indiana trustees know of him and of his fitness for the presidential office? There was no educational bureau in that day to serve the purpose of the middle-man, to bring the electors and the candidate into communication. Let the presidential office of this University become vacant today and in less than a month there would be found from fifteen to fifty willing to take the place, and it would be a very hard day's work to read and digest all the testimonials that would be sent in.

In a letter written to Dr. Wylie, immediately after his election, by Professor Hall, that gentleman says:

Mr. John H. Harney, professor of mathematics, and myself, who both have long *proposed* and desired your election to the presidency of the College of Indiana, cannot but be extremely solicitous that you should accede to the wishes of the Board of Trustees, which by this time must

have reached you. In the hope, therefore, that it may aid your determination, be assured that the call of the board is entirely unanimous and cordial; that it meets the entire approbation of the townsmen and of all the principal men of the whole state, both in public and private life.

So it seems Hall and Harney both recommended his election to the Board of Trustees. But there is a tradition that William Hendricks, formerly governor of the state and at the time a United States senator, had done the same thing, and the tradition is a reasonable one. The rival colleges sent their sons all over the West. Two of them, Jonathan Jennings and William Hendricks, were governors of Indiana, and one, Andrew Davidson, was long one of the judges of our supreme court. The year that saw Andrew Wylie a senior at Jefferson, saw William Hendricks a sophomore at the same place, and when Hendricks' commencement day came, Andrew Wylie as president gave him his diploma. Hendricks never forgot his former fellow-student and college president, and it is quite reasonable to suppose that he gave his voice in favor of Wylie's election.

Two days after the election, Dr. Maxwell wrote to Dr. Wylie announcing the action of the board. The letter, which has escaped the ravages of time, was prepared with a care befitting the occasion. Its excellence of chirography and elegance of diction must have engaged the attention of the orderly and scholarly man to whom it was sent. It is quite evident the writer exercised much greater care in its composition than he usually did in his trustees' reports to the General Assembly. General Assemblies met in Indiana yearly, but where would the trustees go for a president if Wylie failed? And so the doctor of medicine wrote to the doctor of divinity the very best letter possible.

How very slow they were in those far-off days! Altho the writer of the letter asked for as "speedy an answer as possible", it was ten months before the final answer came. Not that there were no letters passing between Bloomington and Washington in the meantime. These came and went with a frequency that must have been sensibly depleting to the pocket of a man on a thousand-dollar salary when each one cost him twenty-five cents for postage.

"Come and look the field over anyhow", wrote the Bloomington doctor to the Washington one; and sometime during the fall of 1828 the visit was made. The little that is known of that visit is highly suggestive of the facility with which the events of life may be forgotten. There is a bare allusion to the circumstance of the visit in a letter written by Dr. Wylie, which letter is still in existence.

One glimpse and one only of that reconnoitering tour do we get from the memory of a man still living.

Late on a Saturday evening, Dr. Wylie, wearied and travel-stained, rides into the town of Greensburg in Decatur county, and stops at the taven for the night. The word at once goes to the Presbyterians of the Sand Creek Church, six miles east of the town, that a doctor of divinity from western Pennsylvania would preach in their meeting-house on the morrow. Volunteer messengers, according to the custom of the times, ride up and down the neighborhood in great haste carrying the message. It was not often a doctor of divinity penetrated the Indiana woods in those days and preached to the people, and so it was not at all strange that an unusually large congregation listened to his sermon when the morrow came. That night he was the guest of a Presbyterian brother, Judge John Hopkins, who lived three miles farther on the road toward Cincinnati, where he again delivered an impressive discourse to a house full of the judge's neighbors. A little boy then present, but now an old, old man, Dr. J. H. Donnell of Franklin, remembers Dr. Wylie's touching allusion on that occasion to the young man Eutychus, who sinking down under Paul's long preaching fell from the "third loft and was taken up for dead"; nor has he forgotten the tearful leave-taking from his newly-made friends on the morrow, nor with what grace and dignity of carriage he mounted his horse when the time came and rode off homeward.

Dr. Wylie had traveled from Bloomington to Columbus thru that hill country that afterwards was to be legislated into Brown county. The road connecting the two towns had been recently cut out, and it wound in and out over the hills and thru the valleys without much regard for section lines, as was sometimes the case even in the more level regions of the state. It is doubtful whether he passed a single cabin within the present limits of that county. The Salt creek bottoms were one vast wilderness. The now dead village of Hedgesville had not been founded by six years, and it was seven before the first cabin was built in or about Jacksonburg, now Nashville.

What a joy that ride must have been to him, dear lover of the out-of-doors that we know him to have been! The lofty hills and deep valleys called to mind his own mountainous country, while the gorgeous and variegated hues of the autumnal woods, and the odors from ripening nuts and falling leaves and the noise of birds and animals gleaning the rich fruitage of the woods gave to it all an indescribable charm.

From Columbus to Greensburg the road led thru a settled country all the way. The pioneers' round-log cabins with clap-board roofs held in place by weight poles were still standing. By the side of many of them stood a newer house built of logs scotched to a face, with the corners neatly notched down. Here and there a double or "saddle-bags" cabin had been built, according as the pioneer's increase of wealth and of family had warranted; and once in a while, but not often, the traveler passed a still more pretentious structure, made of hewn logs with a clap-board roof nailed on, and with a brick or stone chimney in lieu of the almost universal "mud and stick" affair.

At intervals of several miles his eyes rested upon a cleared but unfenced space by the roadside, in the center of which stood the neighborhood meeting-house, built of hewed logs, or mayhap a framed structure un-weatherboarded but with the spaces between the upright timbers filled in with clay. Schoolhouses too were to be seen and for that matter more often than meeting-houses. These were rude structures made of logs and surrounded by unenclosed playgrounds. The great mud and stick chimney at one end of each told of the huge fireplace within, while the entire log cut out at the other end was suggestive of the flood of light pouring thru "oil-paper glass" upon the juvenile makers of "pot-hooks and hangers" seated at the long tables within.

New the country must indeed have seemed on that day, but new as it was, the traveler would have seen much the same in almost any road in the state, a fact we who would estimate at its true value the founding of a college in Indiana in 1828 must ever keep in mind.

From Judge Hopkins' house Dr. Wylie took the road that led by Oxford, the seat of the Miami University, where he visited friends and made a note of the ill consequences of putting unseasoned lumber into college buildings; and thence by the way of Cincinnati he went on to his home.

Not till March 20 following his election, a period of over ten months, does he make up his mind to accept the Indiana call. From the few letters wholly or partially saved from destruction, it is evident that call was kept sounding in his ears. Both Maxwell and Hall wrote often and earnestly urging acceptance, and doubtless other citizens of the state were equally importunate.

At home there was a pressure the other way. The friends of Washington College pressed him to stay with them, and he found it hard to cut loose from lifelong friends and to abandon the ties of kinship. But more than all else as a hindrance was his distrust of

the temper manifested toward the school by some, and especially toward Professor Harney and the Board of Trustees of the State Seminary at the time of the latter's election.

At last on March 20, 1829, the decision was made. He wrote:

It would be impossible to convey to you in a letter all the causes of that hesitancy which I have felt in relation to the invitation with which your board have honored me. Mr. Harney's narrow escape contributed considerably to continue this hesitancy. But I have determined at length to end this suspense, unpleasant to myself as it can be.

He said he would accept. But he asked for time to get ready for the removal of himself and family. He could not enter into his new field of labor before the ensuing fall, and he gave a multitude of reasons for the delay.

His acceptance was hailed with joy by the friends of the College, but there was regret at the delay to come. On April 7, 1829, Professor Hall wrote him a long letter urging an immediate coming and giving ten reasons why he should do so, eight of which the doctor himself pronounced "cogent", and some of which are of historical significance.

If indeed it be *impossible* for you to come immediately, either from the health of Mrs. Wylie, from the affairs of the Allegheny Seminary, or some one or more causes, it will be superfluous and impertinent to urge reasons why you ought to be here at the commencement of the summer session. But if anything be either in itself or relatively important, I do assure you, it is your immediate removal hither. And the reasons for this are very many; more than can be properly stated in one or twenty letters. I will, however, state two or three. First, the expectation of the public in this and the adjoining states has been raised—the expectation of your immediate arrival. They believe that the College needs your presence and must dwindle without it; they have been waiting for your arrival to send their children. If you still delay, the public expectation will be in a manner disappointed; their desires towards us flag; and consequently their sons sent elsewhere. Second, we hear of ten or twelve young men waiting to hear your decision and arrival, who, we are told, will go to other places unless you come directly. Third, some students we are informed would leave other institutions if anyone could give them instruction in the studies of the junior and senior years, and this they know cannot take place without your presence. Fourth, we have one or two in the junior year who talk of leaving here unless someone instruct them in the same studies, as they wish not to have a defective education. Fifth, our trustees at their last meeting, acting from some foolish legal quibbles as to the extent of the charter, cut off our English department and came near destroying the grammar school. A word from you will restore all, and not till restored will our numbers be very greatly augmented. . . . Eighth, enemies, you know from Harney's case, the College has. These are sorely plagued at your acceptance. They will be *utterly* defeated by your immediate removal. If you delay I dread more plots. If once defeated they can never try again.

. . . Tenth, the spring is by common consent the best season for a removal. The middle of summer is dangerous; the autumn may be highly so.

But it was in vain that they urged him. There was a babe in his house "not yet five weeks old"; he had in his hands the "business of two estates in which widows and orphans were concerned"; and his relations to the Western Theological Seminary made it necessary for him to attend the meeting of the General Assembly of his church to be held in Philadelphia in the following May.

Out of this General Assembly trip came the nucleus of the first Indiana College library. The Doctor proposed to the trustees that after his assembly work was done, he would, if they approved, visit divers eastern colleges with the particular purpose of examining their buildings and studying their architecture; and he proposed also to visit the moneyed centers and solicit donations of books and funds with which to buy books, and "an apparatus" for the College. The trustees gave him the roving commission he asked for, and in May he went to Philadelphia.

No stronger evidence of the prevailing poverty of the times, not to say of western servility to the East, can be found than this commissioning of the newly elected college president to go on a begging tour for a state institution. To the president, as a churchman, it doubtless seemed well enough, for the church is divinely commissioned to ask the aid of the faithful everywhere to carry on the church's work; but for a board of trustees, nominated by state authority and working in behalf of a state institution from which sectarianism was rigidly excluded both by law and public sentiment, it was quite another thing. But a library and chemical and philosophical apparatus were so much needed, and there was such a dearth of funds, that in their extremity the College authorities humbled themselves and their state, by asking the full purses of the East to contribute to their wants. Who can know the straits to which the Fathers were reduced in the upbuilding of our beloved institution!

In Philadelphia Dr. Wylie was the guest of the Rev. Dr. Samuel B. Wylie, his uncle, who was the father of *our* Dr. T. A. Wylie, then a student in the University of Pennsylvania. In that city he made little effort for books or funds. "The frequency of such applications recently in Philadelphia", he wrote, "prevented my attempting anything there." Nevertheless he must have solicited books from his uncle, and that not without avail, for when the boy Theophilus had grown to manhood and had come to Bloomington as the professor of natural philosophy he found in the College library books

that he recognized as old and familiar friends, books that once belonged to his father's library.

From Philadelphia Andrew Wylie went to New York, where he pressed his mission, and not without success. First, he "prepared the way", as he himself says, by preaching on the Sabbath "in two of the churches" and the next two days he employed in "making acquaintances". "The rest of the week", he continues in a letter written to the president of the board, "I design to spend soliciting donations and hope to succeed in some degree. . . . I shall try hard to raise funds enough in this region to procure an apparatus for our College."

This was in June. How long a time he spent in New York is not now known, nor what other towns and cities he visited, if any. No money was procured to buy the much-talked-of "apparatus", whatever that was, but the solicitor did meet with no mean success in his pursuit of books. "Two hundred and fifty-five volumes so assorted as to embrace history, geography, belles lettres, and treatises on chemistry and mental and moral philosophy" was the number brought in. "These books", wrote the president of the board in his report to the General Assembly of the state, "were all new and of the most approved authors and estimated at being very low for \$600." And as if it were not enough to report to the legislature that the institution had after five years procured the first books for a library, and that by begging them in the East, the good man triumphantly, as it would seem, declared that these books "have not cost the state or institution a solitary cent" but were "gratuitously presented . . . by various donors in the middle and eastern states". Arthur Tappan, a wealthy and charitable New York merchant, contributed \$100 to the book fund, for which generous act he "received the special thanks of the board".

During the twenty-two months that intervened between the chartering of the College and the arrival of the president no change was made in the curriculum of studies. The work continued to be carried on in all respects the same as during the Seminary days. But there seems to have been a falling off in attendance. The thirty-five students that were on the ground when Dr. Wylie was elected had dwindled to twenty-four, according to the memory of one of the number who is yet living.⁸

The trustees were at work in the meanwhile, having caused to be erected a large three-storied brick building which, when completed

⁸Judge Banta referred to Mr. William H. Jones, '36, who has since died (July 29, 1897).

two or three years afterwards, vied with the then new courthouse in architectural beauty and finish. It was burned in the spring of 1854.

In the autumn following the summer trip to Philadelphia and New York, we find the president-elect at his old Washington home ready to set out on his western journey. The baby had grown somewhat by this time, the trusts for the widows and orphans were settled, and the care of the Theological Seminary had been left with the General Assembly, and there was nothing to detain him longer. But a protracted drouth had put the rivers at a low stage—so low a stage that steamboats could ascend the Ohio no higher than Wheeling. As the time passed he became impatient to be off. September was drawing to a close and he could delay no longer. Four two-horse wagons were accordingly laden with his household goods and hauled overland to the head of steamboat navigation. Fourteen persons, including nine children, constituted President Wylie's family. Lewis C. Bollman, a lad of eighteen, accompanied him, in order to finish his education in the new Indiana College.

On September 27 the movers were in Wheeling. The river was low, so low that the steamboats had ceased running even that far up, and in spite of their journey overland they were compelled to wait for a rise. Friends and relatives lived in Wheeling, who were visited; and, a Sunday intervening, Dr. Wylie preached in one of the city churches. In "three or four days" the river began to rise, and with the first appearance of the rise the steamboat captains, ordering the fires to be kindled in the furnaces, began ringing their bells, and all was soon bustle and confusion on the Wheeling wharf. The movers with all their stuff were soon aboard, and their boat cast off, steaming down the river by day and tying up by night for the lagging flood to overtake them. They reached Louisville in time for the Doctor to repeat his Wheeling sermon to a Louisville congregation on the ensuing Sunday.

The wagons sent by Dr. Maxwell from Bloomington were there on his arrival, or came soon after, and the overland journey of ninety-five miles to Bloomington was soon begun. The Doctor, his wife, and his younger children rode in the "barouche", while others went in the wagons. Young Bollman walked part of the way in "company with a wagon". At some point on the journey he encountered a kinsman on horseback, and they two journeyed on to Bloomington after the fashion in which Samuel Johnson and his friend David Garrick went down to London—they "rode and tied".

The first night the movers stayed at New Providence with Mrs. Borden, and here they saw evidences of the much-dreaded fever and ague, to guard against which they at once adopted the custom of the country and drank whiskey with their water. The next day at noon they reached Salem and stopped till the next morning. Here was the Salem Academy, a school founded two years before by John I. Morrison and already widely known. The afternoon was devoted to visiting this school.

The president had written to Dr. Maxwell that "it would be important that the manner of his entrance upon the sphere of his future operations should attract some attention"; and the doctor and the two professors, and perhaps some others, resolved that nothing should be lacking to make his entrance into the town as impressive as possible.

It was late in the afternoon of October 9 when the immigrants arrived. The town was in its Sunday best. No such spectacular display had ever been witnessed before in Bloomington as was to be witnessed that afternoon and evening. A deputation consisting of trustees, county officials, professional men, private citizens, and students, under the command of Gordon Robinson, a military man, having been a soldier in the War of 1812, were to meet the president at a designated place and escort him into town. Bollman had told the townspeople at about what time to expect the advent of the movers, and so at the appointed time a courier rode down the highway till he met them, when he rode back to give notice of their coming. A sentinel was posted in a beech tree in the campus close by the spring to give notice of the coming of the courier. In due time the warning was given, and professors and students, trustees and citizens, all marched forth in double file to meet the coming man. At the proper place the column divided and the cavalcade passed between the two rows, who gave vent to their joy in loud and long continued huzzas! To the eyes of the Indiana lads present, some of whom at least had never seen a vehicle finer than a "Dear-born wagon", the president's "barouche" was an imposing affair.

On their arrival at the president's house, the tired movers found it "swept and garnished". The Bloomington matrons and maids, vying with their husbands and brothers, gave doubtless the more appreciative welcome. The fire played cheerfully upon the hearthstone that October evening, and after a season of hand-shaking, the tired and hungry travelers were led out to a bountiful supper. A young college student, McKee Dunn, saw that table and was won-

derfully impressed with its tempting viands and its artistic setting. He never forgot that the "butter was ornamented with a spray of cedar".

An illumination followed the supper. It must have been a unique affair. A pole was raised above the roof of the new College.

The upper end passed through a center of radiating pieces bounded by a circumference, and continued to rise yet a few feet. Near its top crossed a bar at right angles; and at each end of the bar a candle represented a professor, and a very large candle on the end of the pole itself personated the president. The students, twenty-four in number, stood in the candles around the circle below.

The president candle was the largest candle, according to the recollection of General Dunn, that had ever been in the state. It was as tall as a man. The two professor candles were of smaller size, and the twenty-four student candles were smaller still.

While the greater and lesser lights of the New Purchase "glimmered forth that night in all the glory and effulgence of cotton wick and beef tallow", a meeting was held in Professor Harney's room, the lower northeast corner room of the *oldest* College building, the very room in which Professor Ballantine taught mathematics twenty-six years afterwards when the *older* College building had burned down (1854)—and to this meeting came the president, the professors, the students, the resident members of the board, the professional men of the town and divers of the citizens, including one of the town fiddlers, Albert Literal, and one of the College flutists, John Dunn. Introductions and greetings followed, after which speeches were made by the president, the professors, and others. Between the speeches the flutist and fiddler played their most enlivening airs, such as "White River", "Fire in the Mountain", "Jay Bird", and "Bonaparte Crossing the Alps", the fiddler keeping the time by the pat of his foot, in which exercise all the boys and a good many of the citizens gleefully joined.

At a late hour the company dispersed, and that night the people of Bloomington went to their beds happy in the knowledge that the president of Indiana College was at last safe within their gates!

III. THE NEW DEPARTURE (1829-33)¹

IN AN INDIANAPOLIS NEWSPAPER printed on August 24, 1829, is an announcement over the signature of David H. Maxwell, the president of the Board of Trustees of the Indiana College, that on Thursday, October 29, the inauguration of Dr. Wylie as president

¹Read by Judge Banta as the annual Foundation Day address, January 20, 1891.

of the College would take place. The members of the two College boards—the Trustees and the Visitors—are notified that they are expected to be punctual in their attendance on that occasion, while to “the literary gentlemen of the state especially”, and to “the friends of education generally”, a most cordial invitation is extended. And, as if fearful that the “literary gentlemen” and the “friends of education” may not be persuaded to attend the festivities in becoming numbers by the novelty attending the first inauguration of a college president in Indiana, the sagacious president of the board in a postscript adds, “Several addresses by students of the College, in English and Latin, will be delivered on the evening of the 28th.”

It is quite evident that those having the management in charge hoped the occasion would be made to mark an era in the history of the College; and from all the evidence now accessible it seems reasonably certain that in this way they were not disappointed. In the *Indiana Journal* of November 5, an unnamed correspondent tells something of the feast of reason enjoyed by “the trustees of the College and a numerous and highly respectable audience of ladies and gentlemen from various parts of the state” on that auspicious occasion. It is quite true, he makes no allusion to the several “addresses by the students in English and Latin”, which the president of the board promised; but I think we may take it for granted that the addresses were given, and well given at that, for those were days when it was a poor stick of a student who could not stand up before an audience and talk fairly well.

Be this as it may, the chronicler was not neglectful of the ceremonies and addresses of inauguration day. At the appointed hour, the courthouse being packed with an interested throng, he tells us that Dr. David H. Maxwell, after the delivery of “a chaste and appropriate address, presented Dr. Wylie with the keys of the College and declared him duly installed as its president”. Then followed the inaugural address itself—“an inaugural”, says our chronicler, “which occupied about an hour in the delivery, and which for sound philosophy, expanded views of science and literature, lucid argument, nervous simplicity and manly independence, may be honorably compared with the best productions of the kind in our country”.

This, you say, is strong language, and so it is; but when on November 26 the *Journal* published the address in full, its editor, who was not a correspondent and not bound to praise, nevertheless wrote no less positively in praise of its “simplicity, elegance, soundness, and strength” than the unnamed chronicler had himself

written. A pamphlet copy of that inaugural, dog-eared and time-stained, is before me as I write. Its very appropriate theme is, "Of What Advantage is a College to the Community?" and on reading it after the coming and going of sixty years since it was spoken, I am struck with what seems to be the conciliatory air pervading its every utterance and the seemingly far-away echo of some of its sentiments.

All men were not of one mind in those days (at least here in Indiana) as to the true place of the College. Indeed, there were a few who had such distrust of college-bred men as to deny the College *any* place in a free state; while there were others whose ideas with reference thereto were so very hazy that they were as liable to turn up antagonists as friends. It accorded with the views of the orator of the day to take high ground in favor of scholastic training; and so he did, yet he did it in such a persuasive and conciliatory tone as not to antagonize those who should be less pronounced in their views than he. In well-chosen language he shows wherein the community would be the better by the liberal education of its four so-called learned professions—medicine, law, theology, and pedagogy,—not forgetting to enlarge upon the benefit that would accrue to that "most respectable class in society, the farmer" by the education of such a "considerable number" of his class as the growing prosperity of the country would ultimately make possible.

Doubtless, that *first* of our inaugural orations would make dull reading to the most of us today; but let us remember that it was spoken for a people who were in the a, b, c, of knowledge as to the true mission of the College, and that if we have advantages beyond them in this respect our advance was made possible in a very large degree by this very address, and by the subsequent addresses appropriate to the times delivered—some here on commencement occasions, and others elsewhere in the state—by the same distinguished speaker.

It is a fact worth stating that, up to the time of Dr. Wylie's coming, I can find no trace of an educational literature outside of the legislative acts and of the reports of educational committees in the newspapers of our state. This inaugural address was the first educational address ever published in an Indianapolis paper, and as far as I know, the first in the state; and up to 1835, of the dozen or more literary and educational addresses published in the capital papers, every one (save one) was from the pen of the president of the Indiana College.

Let us then, as generous scholars, treasure the memory of one who did so much to make possible the vantage ground of today.

Little more is known of the incidents of that first inaugural day than what is here recited. We may well believe that the president of the board as well as the president of the College was somewhat anxious as to the result of the day's exercises. We have the testimony of Mr. Lewis Bollman that he and such other of the Washington College students as had followed the president to his new field of action were much concerned as to the impression their much loved preceptor would make. When one citizen was seen taking notes of the doctor's speech, Mr. Bollman could scarcely conceal his solicitude. What did it mean? Was the enemy already preparing for war? The young Pennsylvanian was bound to know; and so after the exercises were closed, he drew nigh to the notetaker and asked him what he thought of the address.

"It was a very ordinary address, sir—a very ordinary address. He used but two words that I do not know the meaning of", was the unexpected reply!

Would that we could look back upon that old Indiana College at the time of the new departure, and see its professors and its students and their work. Its professors we know: Wylie, Hall, and Harney—men of renown even then, and each to become more renowned as the years go on; but who can tell how many, and who, were its students? No catalog of the first College year 1829–30 has come down to our time, and the legislative reports of the time are singularly deficient in information as to the number of students in attendance at the beginning of this first presidential year. The evidence on hand, however, warrants the conclusion that of our own Indiana students there were not to exceed twenty-five or thirty in attendance, but from the report we learn that there were students "from Louisiana, Illinois, Kentucky, Pennsylvania, and probably from New Jersey". The writer of the report took a hopeful view of the future, predicting that the attendance during the year would not fall short of fifty, and I think it likely his prediction came true. It is known that a large number of Washington College students followed the president to Bloomington—so many that Washington College was nearly broken up for the time being, according to the testimony of Lewis Bollman.

The Indiana Seminary was organized as a preparatory school, and can hardly be said to have ever advanced beyond it. Immediately after the passing of the act chartering the College the trustees, assuming the transformation to be complete, declared that "The

first session of the Indiana College will commence on the first Monday in June next." But there was no change made in the course of studies. The professors on the ground were doing all they could. The greater number of their students were still in the preparatory studies.

In the fall of 1828 we learn, however, that a few students were pursuing the studies usually pursued in a freshman class, and that in one or two studies belonging to the sophomore year work was done—a condition of things that moved the trustees to pass an order at their fall meeting for that year requiring the professors to provide a course of studies for the four regular College classes. This requirement was complied with in part only. The studies for the freshman and sophomore years were marked out by the professors, and there they stopped. They were loath to anticipate the president in the performance of a work in which he was so much interested. Professor Hall wrote to him months before his coming of this very need, and urged haste on his part because of it. If, however, there was no formal junior course of study laid down, it seems quite evident that junior work was done the last year prior to the president's coming, for he found a senior class awaiting him. James W. Dunn and Michael Hummer, together with James S. Rollins,² a Washington College student, took their degrees at the first commencement held in 1830.

The first thing therefore to be done after the inauguration was the announcement of a complete curriculum of studies, and in the following December this was printed in full in the *Indiana Journal*.

As to the matter of that College course, it differed in no essential features from the courses of study common to other colleges of the time. Great stress was given to the languages, the mathematics, the mental and moral sciences, and to belles lettres. The sciences form a very inconspicuous part of it. Outside of the applied mathematical subjects, there was but one purely scientific study in the entire course—chemistry. And inasmuch as there was no apparatus of any kind on hand, and no experimental work of any sort done, we can easily see that the scientific instruction given at that time in the Indiana College must have been exceedingly meager. Mr. Bollman says there was "no chemistry in any shape".³ The late General McKee Dunn, who took his degree in 1832, said on the

²For sketches of these three, the first graduates of Indiana College, see Theophilus Wylle's *Indiana University, Its History from 1820 to 1890* (1890) pp. 166–168. Rollins removed to Missouri and was chiefly instrumental in founding the University of Missouri.

³Lewis Bollman, *The State University of Indiana*, p. 25.—D. D. Banta.

contrary, in effect, that chemistry was taught after a fashion, but that when he graduated he had so little conception of what was required to constitute a chemist's laboratory that he did not even know what a crucible was.

Once for all let it be remembered that the curriculum of studies in this institution, as long as President Wylie lived, was especially full in the line of the mental and moral sciences and of all belles lettres studies. Before leaving Washington College he had introduced in that institution, in lieu of the old metaphysics with its "entities and quiddities", the Scottish philosophy of Thomas Reid and Dugald Stewart; and while textbooks for the senior year are not named in the early Indiana College catalogs, we may nevertheless rest content that, if her bachelors did not go forth well indoctrinated with orthodox Scottish theory, it was no fault of its expounder, Dr. Wylie.

The most curious phase of this first full collegiate course adopted in the state of Indiana was the *order* in which the various studies it comprehended were to be pursued. The plan was one which has been aptly denominated "the one-study plan". The student is required to "give his undivided attention to one principal study till it is completed", say the old catalogs. Thus thru all the freshman and half the sophomore years, he gave his undivided attention to Greek and Latin. The latter half of his sophomore year and all of his junior, he studied the mathematics pure and applied, together with the little of the so-called natural sciences that should be dribbled out. His senior year he gave to the president, in the speculative philosophies, in the evidences of chemistry, in constitutional law, political economy, and literary criticism.

Whether the "one-study" idea, in its application to the Indiana College course, was a new departure I cannot say; but the idea was not new to the common schools of the day. The plan then generally in vogue, and destined to be in vogue for many a year to come, recognized it to the fullest extent. After the boy of the district school had mastered the alphabet, he was set to spelling in his Webster's spelling-book, and not suffered to use any other book until he could not only spell every word in the book at sight, but pronounce every word at sight. He might have learned to read fairly well in the meantime, better it may be than his father or mother; but his teacher, blind to his advance in this respect, kept him pounding away at his spelling-book until he had gone thru it in the required ways and required times. That done, learning to read was next in order. No matter how well or how ill the lad could

read, when this work was entered upon, the first reading lesson in the old spelling-book was assigned him. Probably in anticipation of that great and eventful day, the boy had read that lesson over hundred of times and knew it as well off the book as on:

She fed the old hen.
The old hen was fed by her.
See how the hen can run.

No matter, Begin at the beginning was the rule. The lad must stand up when his turn came and read it off to a master who, ten to one, was more intent upon catching some bad boy in a bit of mischief than he was in the lesson on hand. Toward the close of the pupil's reading era, writing was introduced, but that was a sort of by-play, and need not further be noticed. Last of all, with arithmetic and slate, the schoolboy sat down to master the art of computation. Arithmetic was the crowning work of his educational life. He might give one school quarter to its acquisition, or two or three; but many or few, after he once attained to the dignity of slate and arithmetic, he became a sort of country senior, the balance of whose school days were to be given to the greatest of all his school work—ciphering.

And so, I say, that the one-study plan was not a novel plan to the educational world; nor was it claimed to be, by President Wylie, at whose instance it was introduced in the Indiana College. "This method", says he in the first catalog, "has been adopted by the president under the full conviction, founded on twenty years' observation and experience, that it possesses many and decided advantages over that which is pursued in most colleges, of blending together a variety of studies."

Two recitations a day were required of all classes below the the seniors, one in the forenoon and one in the afternoon—Greek or Latin before dinner, and Latin or Greek after dinner, for the freshman and half the sophomore years; and so on. The seniors attended only one lecture or recitation a day, but it was a long one—frequently three hours long; and especially was this apt to be the case when the Doctor's favorite subject, metaphysica, was the theme.

The one-study plan seems *not* to have worked well in the Indiana College. It was as is so well said by Dr. T. A. Wylie in his history of the University, "no doubt well adapted to minds like the president's, who had in phrenological language a great organ of concentrative-ness, but not to the average minds of students, nor to the condition of things as they then existed".⁴ The plan was popular with the

⁴Theophilus A. Wylie, *Indiana University, Its History from 1820 to 1890*, p. 48.

professors, we may suppose, for each could have the satisfaction of putting on an undivided load; but to the student it was not so popular, and in a few years it was abandoned altogether.

Another custom introduced at this time is worthy the attention of the modern student.

Dr. Wylie was a stickler for early rising. He had been brought up in an age and a country where the maxims of "Poor Richard" were leaving their deepest impress, and it may be that he had thus caught something of the spirit of the "Early-to-bed-and-early-to-rise" philosophy. At any rate, he sought to impress upon the students under his charge the habit of early rising; and to that end it was made a law of the College, that the students should "assemble every morning shortly after daybreak for prayers". This was the requirement as written in the first catalog, and it was the requirement that was enforced. And daybreak meant day *break* in those days, not daylight.

The hour, we may safely assume, was an inconveniently early one, and the evidence is abundant that the students were outspoken in their hostility to it. Except for this hard rule it would scarcely be remembered that the winter of 1829-30 was an unusually mild and open winter. A great deal of rain fell during that winter, and the sidewalks of that part of Walnut street leading from the southeast corner of the public square to the northeast corner of the College campus were not even paved with the rough unelastic limestone slabs that we, who came a quarter of a century later, found. The condition of the unpaved sidewalks of south Walnut street of a rainy, slushy, open winter I leave you to imagine. And so too, I leave you to imagine the high-stepping, dignified Wylie, pulling himself with all haste at break of day thru a yellow mud the tenacity of which even yet is, on occasion, a subject of special wonder. To the unregenerate youth of those far-off days, who had been compelled to leave a warm bed at what he deemed an unreasonably early hour, the sight of the Doctor's laboring in the miring mud at break of day was a source of infinite delight.

The students of those times long loved to tell of their daybreak escapades. Lying in bed till the last moment, half-dressed with unbuttoned coats and vests, they scurried to the College, often to find themselves too late and the door closed in their faces. Then, however, each belated man usually held his ground thru roll call, and hearing his name he would shout back a lusty "Here!" which, if having no other effect, never failed to amuse his more fortunate comrades within.

This stern custom fell into disuse some time in 1832. It signally failed in its purpose, and the wise Doctor must have soon become aware of it. Instead of promoting early rising, it led to late hours in bed. I have heard the late P. L. D. Mitchell, say, that at his "fort" all the boys went back to bed after returning from morning prayers, nor did they rise till just in time to bolt their breakfasts for the first recitation. Nor was this bad practice confined to the students in Mitchell's "fort". Lewis Bollman, Dr. McPheeters, and others testify to its prevalence more or less among all the students of the College.

It was a rule in those days that every student absenting himself from morning prayers was required to show a sufficient reason therefor to the president, and a tradition has come down to our times to the effect that the high degree of ingenuity, daring, and skill attained by some students in the framing of excuses had something to do with the abrogation of the rule. To such a high pitch was the art carried, that it came to be a kind of by-phrase, "It is a poor stick of a student who can't show a good excuse for having overslept himself!"

The most of you, I suppose, have seen the picture in Dr. T. A. Wylie's book of the first College buildings. The main one, a rectangular structure of three stories and many windows, with a deck roof and a pepper-box cupola, and resembling more (says our Dr. Wylie), "a New England cotton-mill than a college", was once *the* Indiana College—in brick and mortar. I will not consume time on this occasion by any description of that building. It is enough to say that at the very meeting of the Board of Trustees when Dr. Wylie was chosen to the presidency, steps were taken looking to its speedy construction; and when, after the lapse of nearly twenty months, he entered upon his work, he found the walls up, the deck roof on, and a contract made for the speedy glazing of the windows. It was to be three years yet before that great building should be ready for occupancy. I say "great", because its dimensions were such as to call for an apology from the trustees to the General Assembly for building it. The history of its erection is a most suggestive one. The first act of the board in reference to it was to appoint a committee of three of its own members to draft a plan. Architects in those days, it would seem, were not to be found in the West. About this time a legislative committee sent all the way to New York for a plan for a new statehouse, for which they paid \$125. But the Indiana College could not afford to hire an architect, and so a committee was charged with the responsible duty

of reporting a plan. But the committee never reported a plan. Two or three days after the appointment of the committee, the board instructed it to proceed at once and provide material that could be used in the construction of a College building on any plan that might hereafter be adopted. The truth is, there never was a plan agreed upon. Like Topsy, that building "just grew". In Professor Hall's *The New Purchase* it is said that the builders began excavating for a square building on the plan of the courthouse, then recently completed and the architectural ideal of the time, but that Dr. Maxwell and others interfered and secured a rectangular foundation. The builders had 300,000 bricks at their command, and it looks now as if they had built skyward till the bricks ran out. In December, 1829, we learn that the board had in view—in addition to recitation rooms, library, and chemical laboratory—a great "college chapel, with ample galleries, so as to accommodate a very large assembly". At one end of the deck roof was to be a cupola, and at the other an astronomical observatory. By the next December to these ideas a new one was added. Nothing more is said of the cupola, for I suspect that had been put in place. The "indispensable necessity in some instances for different apartments for the inculcation of different sciences" is mentioned, and so is "the pressing necessity for a large hall, or chapel so called, for the use of students on commencement days" and for the accommodation of the public on these occasions, but the gallery had been dropped. The new idea comprehends the "dormitory system". The students must have "commons or lodgings", says the report of December, 1830, and thus is the question argued:

Boarding, although it is obtained very low at Bloomington, is the most expensive item in the education of a young man. In some of the most respectable colleges of the United States, it has become the practice for ten or twelve young men to unite, and from time to time to purchase articles of diet in the market and hire some person to cook and keep a table for them; and in this way their boarding does not cost them more than 50 or 62½ cents per week. To do this, however, they must have lodgings in the College buildings, and to provide such at as early a day as practicable has been one main object of the board.

Nevertheless this is the first, and for that matter the last, that was ever heard of the dormitory plan in connection with the Indiana College.

We cannot close this notice of the material surroundings of these first years of the Indiana College without a brief reference to the College library and apparatus. We saw in the address given last

year⁵ that in the summer of 1829 Dr. Wylie, with the consent of the board, went to the seaboard states to beg money and books for a College library. Well, his mission was attended with such success that in the report of the trustees made in December, 1830, we are told that "the College has a library of 235 volumes, so assorted as to embrace history, geography, belles lettres, and treatises on chemistry and mental and moral philosophy". "These books are all new", continues the report, "and of the most approved authors and estimated at being very low for six hundred dollars." This first College library was destroyed by fire in 1854, but a catalog of the 235 volumes, in Dr. Wylie's hand, is still in existence, a perusal of which adds materially to the spirit of resignation one ought to feel for the burning of that library.

The first apparatus to come into the College consisted of two globes, a terrestrial and a celestial, costing \$31. We get this fact from this report of December, 1830; and in the same report we find the trustees importuning the General Assembly for an appropriation for a philosophical apparatus. After assuring the Assembly that the funds at the disposal of the board did not warrant the purchase by them, the report enlarges upon the great importance in an educational point of view of a philosophical apparatus. "What", exclaims the writer of this report—

What is there more calculated to expand the mind and enlighten it than the study and developments of experimental philosophy? Nature cannot be comprehended without its aid; and will the General Assembly, the guardians of this institution, who are bound as they love and respect the state, to protect it, foster, and exalt it—will they stand still whilst strangers at the distance of a thousand miles are generously giving it an impulse in its march onward?

Alas! alas! the General Assembly stood still. Fervent as was the appeal for material aid, not a dollar was voted—whereupon the board went off and bought an apparatus for themselves at a cost of \$367.70. And upon a report made by Professor Elliott when he took charge of the department a few years afterwards, which has escaped the ravages of fire and time, we learn that this philosophical apparatus consisted in part, if not in whole, of an electric machine with battery and discharger, a galvanic battery, a small galvanic pile, an airpump with three receivers, and the mechanical powers complete.

It is pleasant to note the signs of prosperity that followed the new president's coming. The 30 students entering the College in

⁵See the second address, above.

the fall of 1829 grew to 59 at the beginning of the following year, 34 of whom were Indianians, 10 Kentuckians, 8 Pennsylvanians, 1 Tennessean, one Mississippian, 1 Louisianian, 1 Illinoisan, and 1 Missourian. Three students took their degrees at the first commencement in 1830. By the end of the next year (1830-31), the whole number mounted up to 60, 4 of whom took their degrees at the second commencement. The next year (1831-32) the whole number enrolled was 53, 5 of whom took their bachelor's degree; and in 1832-33, 65 students were enrolled, 3 of whom were sent forth as graduates.

Did this not mean prosperity? Yes, for the times, it did.

And yet it was the prosperity that came amidst the storms of war.

Those who have kept the run of these Foundation Day papers have learned something, I trust, of the hostility manifested toward the Seminary from the first day of its opening, when the town lads with spelling-books and readers demanded admission to its privileges, up to the day when it was elevated to the dignity of a college by legislative enactment.

Whether the General Assembly was influenced in any degree to grant a college charter, by the hope that a college would meet with more favor than the Seminary had, is uncertain; but it is certain, that it was believed that the ground for opposition to a state institution, whether real or imaginary, would be removed by the change. A new and more numerous Board of Trustees was provided; also a Board of Visitors on whom was conferred extensive powers of review. And, as if this were not enough, the charter itself provided against all the evils that had been complained of in Seminary times.

But the time had not yet come for the singing of the good-will-and-peace anthem over the Indiana College. On the contrary, the College had inherited all the Seminary's enemies and enmities, and it was by no means an unnatural inheritance. Those who expected these enemies to bury their opposition in the grave with the dead Seminary were doomed to disappointment. The College had been flung into the midst of a warlike people, and it was impossible for it and those connected with it to escape the fire and smoke of battle. Before Dr. Wylie's arrival in Bloomington, he was made the target for severe animadversion by at least one paper in the state. Before his arrival, preparations were formally made for a combined attack upon the College and its management in the succeeding legislature by all its enemies; and hardly had that foe been met and overthrown, ere was heard the first murmurings of that internecine war—

the bitterest college civil war, I doubt not, ever waged in the West, and which ultimately resulted in the dismemberment of the faculty and came nigh disrupting the College itself.

No, the day of peace had not yet come to the Indiana College. The battle had to be fought out and was fought out; and while the story is not a pleasant one to tell, yet it falls within the purview of this history, and to escape its telling is to cease the writing.

But how can it be told? By the mere narrative of the events in the order of their sequence? This mode would result in injustice to the actors, and besides that gives us a pointless tale. All history may not, like "all Scripture, be given by inspiration of God", but it is nevertheless, when rightfully and truthfully written, "profitable for doctrine, for reproof, for correction, for instruction in righteousness". At least so I love to think. Two distinct controversies were waged during these gloomy years, and each was a product of the times—a sort of necessary result of certain moral forces then existing in our state. The external attack came first but in no sense was it the cause of the internal conflict. Each was independent of the other, and yet both were the resultants of similar forces; and so different is the state of society in Indiana today from what it was sixty years ago, that either story would be inexplicable if read only by the light of today.

It is due the occasion to say that when this paper was begun, it was with the purpose of carrying the story of our College down to the close of that period of domestic strife to which allusion has just been made, but such an accumulation of historical data relative to these times turns up, as we progress, that it becomes impossible to go further today in the story than down to a certain "spring exhibition" in 1832, on which occasion the dragon's teeth were sown that afterwards sprung into armed men almost to the undoing of the Indiana College.

Without going into an extended discussion of what, at this late and let us hope better day, may be regarded in the light of characteristics of the people of Indiana in the time of the early history of our state, it will aid you, I trust, to a somewhat better understanding of the men and events of the times to keep in mind one or two of the most prominent characteristics of the Indianians of the period.

I believe if I were asked to give a name to what I conceived to be the most prominent characteristic of the Indiana man of that time I should say, *pugnacity*. It is true this is a characteristic he had in common with all other western men, but it was *his* characteristic nevertheless, and he possessed it in a high degree.

Next to his pugnacious spirit came a characteristic which for want of a better name may be called a *spirit of intensity*. Men felt more than they thought. More than is the case today they were given to act upon impulse rather than from reason. They were more emotional and were easier to be moved by the orator than is the case now. They felt more intensely than we do. They were more apt to act under the inspiration of the "hurrah" than are we. There was more of the "nobly wild and extravagant" in the character of that day than this. Those were the days when the river hero was "half-horse and half-alligator"; when the country hero was a "six-horse-team-with-a-bull-dog-under-the-wagon". It was a day when a militia brigadier-general could empty a barrel of whiskey and a half-barrel of sugar into a public well and receive the plaudits of the battalion.

It was this intense, impetuous, extravagant spirit which drove the state not long after this time into that disastrous internal improvements system, the evil effects of which have scarcely yet disappeared.

After these characteristics, I would mention patriotism, sectarianism and orthodoxy, partisanship and sensitiveness. The Indianian was intensely and pugnaciously patriotic, sectarian and orthodox, partisan and sensitive.

Most of these characteristics belonged to him in common with all other western people, but not all. He was sensitive to criticism from outsiders as was no other people in all the Mississippi valley. Why? Well, he got more of it. There was a time in the history of our state when it was the fashion to "poke fun" at Indiana, and everybody did it. Why so? Taken all in all, it may be assumed that the early settlers of Indiana were the poorest class of men, in so far as money was concerned, that ever settled any state in the valley—a circumstance, however, not to be mentioned to their discredit. A large per cent of them had been impoverished by the Revolutionary War, or were the descendants of those who had been so impoverished. A still larger per cent emigrated to the state to escape the curse of slavery.

Of all the western states, Indiana presented the greatest natural obstacles to the home-maker. Its forests were not excelled in any state, while the generally swampy condition of the country made it a peculiarly difficult one in which to make farms and found prosperous settlements. Add to these drawbacks the scourge of the autumnal sickness which prevailed from the Wabash to the Big Miami, and we see abundant reason why the state was kept back in

the march of progress. It was no reflection upon the people of Indiana that their development in material wealth was slow; that they had bad roads, poor schools, and the "fever and ague".

But because of these and kindred misfortunes Indiana (dare I say it, even yet, and even here?)—Indiana became a by-word. Indiana, her people, her roads, her sickness, her poverty, her fever and ague, was made the target for all the weak newspaper criticisms and stupid jokes of the entire country.

Almost from the foundation of the first American settlement within the Indiana border, the defamation began. Lawrenceburg and vicinity were settled mainly with men from Maine, Massachusetts, and Connecticut, but not long is it before we find these representatives of the cultured East engaged in a war of epithets with their Kentucky neighbors on the south side of the Ohio. The Kentuckians screamed "Hoosier", the Indianians shouted back "Algerine". The latter word has been forgotten—absorbed in "Corn Cracker", possibly—but "Hoosier" has stuck. Who knows its genesis? No one, nor its meaning. It came from without—that seems certain; and was used at first as an epithet of reproach. It did not need to have a meaning in the beginning—nay, it served the better purpose without a meaning; for it was enough to cry "Hoosier!" "Hoosier!" to make the Indianians, from the Ohio to the outermost verge of the settlements grit their teeth and curse their tormentors. Of course it hurt. No man—no men—will endure to be made game of. Jeer at, jibe at, laugh at, poke fun at the best man in your town, and you will soon have him fighting or crying.

There came a time when we no longer cared, but it was long after 1830. The truth is, our state and our people and their ways continued to be the fruitful themes of jests and criticisms till the war. Till that period the Ohio people looked disdainfully across the border at us, and even the wretched Suckers, our brethren on the west, turned up their noses at us; while as for the Kentuckians—well, how unctuously they could give us their African pronunciation of "Hoosiah!"

As late as 1854 the natural and necessary effect of all this odious criticism was to develop that sensitive characteristic of which I have before spoken. It is a characteristic the influence of which I am told is still felt in some of the staid and out-of-the-way places of southern and central Indiana, but I think this is scarcely true. But at and before and for some time after 1830, its influence was felt in every neighborhood. I can best describe the Indiana peop of

that period as standing huddled, "snouts out", on the defensive. All newcomers were suspected, all friendly critics were snubbed. Foreign teachers were received with misgiving, and there was a strong undercurrent of belief that a college under the control of such teachers would in some way become inimical to the best interests of the state.

From the first day of the opening of the Seminary, Professor Hall was confronted with a serious opposition growing out of this sentiment; and notwithstanding the fact that he tried in every rational way to show to the people there was no cause for their antagonism, he never quite succeeded. Harney encountered the same unreasoning and disagreeable opposition, and even before Dr. Wylie entered the state like opposition was manifested toward him.

In the *Annotator*, a paper published at Salem—a stray copy of which, issued on September 20, 1829, twenty days before the Doctor's arrival, I have managed to capture—appears the first attack on him ever made in the state, so far as is now known; and this I will read in illustration of the proposition under consideration:

[The article referred to is not included in Judge Banta's manuscript. Evidently he read from the copy of the newspaper in his possession, which has since disappeared. It has been impossible to find anywhere a copy of the *Annotator* of this date, to supply the missing article. However, the following reply to it published in the *Indiana Journal* of November 5, 1829, gives an idea of the character of the attack:

MESSRS. EDITORS: Some few weeks ago the Printers of the *Annotator*, a paper published in the town of Salem, thought proper to denounce the Rev. Dr. Wylie, as the slanderer of the Western Country, and to warn the parents of this State from placing their sons under the care and tuition of this libeller of Indiana. As a reason for this singular denunciation, and tender solicitude for the welfare of the youth of Indiana, the aforesaid Printers gave an extract from a letter addressed by Dr. Wylie to the Secretary of the American Educational Society. The extract which they gave seemed merely to show, what every man of sense in the west knew before, viz: that no reader of sermons could here be popular or useful as a public teacher of Religion. Yet inasmuch as the said extract was partial, erroneously printed and accompanied by no little malediction, by which false impressions may have been made, I will thank you, Messrs. Editors, to publish the whole letter, which I send you in the Journal of the American Educational Society; your readers will then see that so far from being reproachful to the west, the country of Dr. Wylie's nativity, it is highly complimentary. "Let", says the Doctor, "the weak and the ignorant, if they must undertake the office of giving instruction, undertake it in older countries where they can more readily derive aid from contiguous auxiliaries. In such a region as the WEST truth needs strength to support it." It is to be hoped that the Printers of the *Annotator* will on reading

the letter again, feel the necessity of publishing it *entire* and thus doing justice, not to the enemy of Indiana but to a friend and one destined, I trust, to be one of its brightest ornaments.

A SUBSCRIBER.

Let us briefly call your attention to one other characteristic. I have said the Indianians of the early period were marked for their partisanship. They were intensely and pugnaciously partisan.

Political parties as we understand the term did not, however, exist in Indiana as early as 1830. It was not until sometime in 1834 that we first read of Whigs and Democrats in the state papers. Prior to that time the politics of the state was factional. Sometimes the people divided on the most trivial of issues. The issue in the first general election held in the New Purchase was "White water men or Kentucky men". Later the politics became still more factional, the people yielding to a sort of hero worship and following the leadership of this or that great man of the hour. In the domain of national politics they were Adams men or Clay men or Jackson men. In state politics they were Ray men or Noble men or Hendricks men. In county politics, here in Monroe county, they were Lowe men or Maxwell men.

William M. Lowe—or Judge Lowe as he was generally known—and Dr. David H. Maxwell were both of them men of force of character. Both were ambitious and both were politicians. Both served in the first constitutional convention of the state, and both were honored with office by the electors of Monroe county. Lowe's official life was confined mainly to local executive offices in the county, while Maxwell's was confined mainly to legislative offices. In a convention of the friends of General Jackson held at Indianapolis on January 10, 1828, an electoral ticket was formed with William M. Lowe, of Monroe county, as one of the electors. Two days later the friends of Mr. Adams held their convention at the same place, when on motion of David H. Maxwell a committee was appointed to select the names of five persons "friendly to the present administration" to serve as presidential electors; and one of the five appointed specially to compete with Judge Lowe was James Armstrong, of Monroe. Dr. Maxwell had himself served as an Adams elector in 1824.

On January 24 of that same year the Indiana College was chartered and its Board of Trustees constituted with a view to satisfying everybody. Dr. Maxwell, the Adams man, was of course made a member of the new board, and so was his General Jackson competitor, William M. Lowe. In May following, Dr. Wylie was

elected president, and in the following October we find him in Bloomington looking around. In the same month the board met and presumably Dr. Wylie with it. Be this as it may, at or a very short time after that meeting, Judge Lowe resigned his trusteeship. What did that mean? The old record gave no reason. Judge Lowe left no word written or remembered behind him explanatory of the causes of that resignation.

It is not always an easy matter to fathom the motives of a man, and especially of a silent man, but it is in general much easier to do it *after* than at the time. All the evidence at hand warrants the conclusion that Judge Lowe was preparing himself to take a part in the campaign already inaugurated against the College and those having it in charge. Maxwell was an Adams man and had doubtless been instrumental in securing the appointment of a Monroe county man to make the race against Lowe as an elector. Wylie was at least an anti-Jackson man and there is reason to believe that Harney was also. Of Hall's politics nothing is known.

While it may be safely assumed that no charge was ever preferred against trustees or professors of political proselyting or other political wrong-doing, yet I have an abiding conviction that political prejudice and ill feeling was one, if not the most potent, motive leading to the attack in the legislature of 1829. It was so understood at the time as we shall presently see; and the relevant collateral facts point unerringly to the same conclusion.

On September 24, 1829, a somewhat lengthy "Address to the Public", signed by twenty-four persons who say they are students of the Indiana College, or had been, was printed in the *Indiana Journal* in refutation of a "publication from the *Republican Statesman* purporting to be a memorial to the legislature"; to which address was appended a somewhat extended explanatory statement, signed by "Friends of Learning",—which one reading thru the lines sees was Dr. Maxwell.

The *Republican Statesman* was a newspaper printed somewhere by a Mr. Morrison, but where I do not know—probably in Bloomington; but fortunately the writer of the "Address to the Public" and "Friends of Learning" incorporated in their compositions the charges made in the memorial, and we are thus enabled to read in the language of the critics themselves their causes for criticism and for war.

1st. The professors manifest great partiality in attending to the interests of some sectarian students, to the great prejudice and almost entire exclusion of others equally worthy, and treat their application for redress with insult and neglect.

- 3rd. The faculty make use of improper means to induce the English students to withdraw from the English and attach themselves to the Latin department.
- 4th. The faculty employ ushers incompetent to discharge the duties assigned them.
- 5th. The faculty neglect to spend in recitation the full time appointed in law.

A sixth charge is insinuated, says the address, to wit: "That the faculty inculcate Sectarian principles".

The second charge was leveled at the board, and was in effect that the board had sustained the faculty in a certain unjust, but unnamed, ruling.

To all these charges against the professors, the twenty-four students file their denial—general and special; and they further say: "We consider the publication of the memorial to be an ebullition of *party feelings*, having for its object the *promotion of political ends* and the destruction of the College."

Whether this particular memorial was ever presented to the legislature does not now appear; but if the two or three dissatisfied students, its projectors, abandoned the controversy, there were those ready and willing to take it up. Four petitions were presented to the legislature the ensuing session from citizens of as many counties, calling for an investigation of both professors and trustees of the College. One of these was from William Lowe and sundry citizens of Monroe county. Another was from Washington county, Judge Lowe's old home. Another was from Clark county, and still another from Scott.

Imagine four petitions going up to the General Assembly now in session at Indianapolis from citizens of as many counties praying an inquiry into certain abuses by trustees and professors of our beloved University. What consternation it would create! How much greater that consternation must have been in that day of weakness and littleness!

The students were swift in sending up their remonstrance against these petitions, and with it went "sundry communications from different individuals". Petitions, remonstrance, and communications were referred to the committee of education in each branch of the Assembly. In the Senate Dr. Maxwell himself was chairman of that committee, and in the House, Horace Bassett. Dr. Wylie, mounting his horse, rode up to the capitol, when "by request of the standing committees on education of the present General Assembly", says a chronicler of the times, he delivered on Sunday, January 17, at the Methodist church, which was the largest in the town, a discourse on the subject of education,—a discourse which was not only

printed in the newspapers of the day, but received highly complimentary editorial notices, and a vote of thanks from the General Assembly itself. Maxwell's and Bassett's committees reported adversely to the petitioners, and so the campaign against the College proved a failure for that time.

But it was renewed the next year, and the next, and the next, and so on. There was to be no peace for the Indiana College yet awhile. If politics entered as a motive in the attack of 1829, as I think it did, it was soon eliminated, and sectarianism substituted in its place.

By the meeting of the next General Assembly, the enemy reformed his lines and the attack was renewed. Petitions came again from Monroe, from Clark, from Owen, and from Warrick counties, the burden of which was, Drive Sectarianism out of the Indiana College!

Was it there to drive out?

The faculty said it was not; the students said it was not; the Board of Trustees said it was not; and legislative committees said it was not;—but what did all these denials amount to in the face of the fact that all three of the members of the faculty were Presbyterians? That was the quality of Sectarianism the malcontents were warning against.

In the report of the trustees for December, 1830, after entering a solemn denial, the names of the fourteen trustees are set out, after which follows this somewhat remarkable statement:

Of this board it is believed four are Presbyterians, or at least were so educated; four Protestant Episcopalians; three Baptists; two Methodists; one Covenanter; and one a member of the Christian Society or Church. Out of such a mixture of religious opinion it cannot reasonably be supposed, that a majority could be prevailed upon to establish, or in any respect to countenance a sectarian denomination.

Again the educational committees reported exonerating the College management, but the disturbance went on. There is evidence of a growing legislative discontent. Two or three members offered resolutions looking to the lowering of tuition fees; one member wanted the law changed so that orphan children could attend free; another that "poor and indigent students who are unable to educate themselves" should "receive tuition in said College gratuitously". But it remained for the member from Putnam to come forward with the most startling of all the propositions:

Resolved, That the committee on education be instructed to inquire into the expediency of so amending the existing charter of the State College at Bloomington as to prohibit the trustees thereof from continuing after the expiration of

existing contracts any two professors or teachers of the same religious sect or profession; and also to prohibit the appointment hereafter of any two preachers of the same religious creed as professors or teachers in said institution.

A petition from "Amos Lake and others" was of the same tenor; and resolution and petition being referred to the committee on education, that committee in vigorous language showed how a compliance with the prayer of the parties would result not only in making the qualifications of the Indiana College professors depend upon their church membership rather than their scholarship, but would be right in the teeth of the constitution, which declared "that no preference shall ever be given by law to any religious societies; . . . and no religious test shall be required as a qualification to any office of profit or trust".

In spite of all this threatening and warning and attempts at legislative tinkering, the College prospered. Its reputation spread broad, and its classrooms were filled with students from almost every state in the West and South. At the opening of the fall term in 1830, it became necessary to establish a preparatory department, which continued down to the close of last year (1890), a period of sixty years.

In the spring of that same year (1830), the new departure carried away the old Seminary Henodelphisterian Society. "Too many great men found themselves members of that society", said one who had been one of them; and on February 12, 1830, Randall and Rollins and John L. Ketcham and Andrew Wylie, Jr., and five others—all of whom are dead save now the venerable Judge Wylie, of Washington City—withdrew and organized the Athenian Society. The next year (1831), according to Lewis Bollman, the remaining members of the Henodelphisterian,—Lewis Bollman, James D. Maxwell, J. L. D. Mitchell, the Dunns (James W., Samuel C., and W. McCree), and others, "disbanded and merged" (says Judge Wright) into the Philomathean Society.

The Indiana College was on the up-grade and rapidly becoming a center of light and learning in the state. Its president was recognized as the leader of the educational forces of the state. His addresses, whether from the college rostrum on commencement days, or to the historical societies, or to colonization societies, or to legislative assemblies, were fountains of instruction which the public press gave to the people as a part of the literature of the times.

To him who studies the history of the moral and intellectual growth of our state during its earlier and more plastic period, there comes the comforting thought that the men who judged that the

time had come for the organization of a college in Indiana, judged wisely and well.

As we look back over the intervening years and read the story of our state's intellectual and moral and even material growth, that judgment stands vindicated on every page of its history.

And whatever may be in store for our loved Alma Mater in the future, in the catalog of the forces for good in Indiana's earlier years, must forever stand written—INDIANA COLLEGE.

IV. THE "FACULTY WAR" OF 1832¹

THERE was a time when the historians disagreed as to whether Daniel Boone ever visited the east Tennessee country prior to the time of its first settlement. The evidence was not conclusive either way, and so some thought he had and some thought he had not. At last this inscription was found cut in the bark of a beech tree growing on the banks of a tributary of the Watauga:

"D. Boone Killed A BAR on Tree in THE YEAR 1760."

And notwithstanding the fact that D. Boone spelled "killed" with a *c* and "bear" without an *e*, the historians accepted the legend as conclusive of the fact that Daniel Boone had visited the country at the time indicated.

The inscriptions found on the trees, on the rocks, monuments, walls, and so on are usually received in the courts of history as satisfactory evidence of the truth of the facts to which they bear witness but not always. Sometimes we happen to know better. There is one inscription very close to us that falsifies the truth of history. It is over the east front entrance of this College building. It states that the Indiana University was founded in 1830, and for the benefit of those who may not happen to know better, let me say that there is not a word of truth in that statement.² The Indiana Seminary was chartered on January 20, 1820, the day we commemorate. The school was opened on the first day of May, 1824. The Indiana Seminary was legislated into Indiana College on January 24, 1828, and ten years thereafter the name was changed to that of the Indiana University.

¹Read by Judge Banta at the annual Foundation Day exercises in the Old College building (now the old high school building) on January 20, 1892.

²The stone bearing the inscription to which Judge Banta refers is now over the east entrance to the Well House on the present campus, having been removed thither after the sale of the Old College building to the city of Bloomington. The date "1830", however, has been corrected to read "1820".

On the first Monday of May succeeding the College chartering, the first president, Dr. Andrew Wylie, was elected; ten months thereafter he signified his acceptance, and on October 9, 1829, he arrived in Bloomington and entered upon his presidential duties.

I know of no excuse for the false record inscribed in the stone over the College door, and I know not whether it was the result of ignorance or of mistake. There was nothing connected with this institution which was founded in 1830.

The story of the institution has been told on preceding Foundation Days, after a fashion, from the beginning down to the close of the collegiate year of 1831-32,—all save the story of a certain faculty controversy which, beginning not long after Dr. Wylie's coming, was waged with unprecedented bitterness to the close of that year, when it ended in a complete disruption of the faculty and threatened the integrity of the College itself.

Anyone who has followed, with even slight attention, the story thus far told, must have perceived how surely difficulty had followed difficulty, and discouragement discouragement, all the way along. Before that May Day in 1824, when the schoolboy rabble with horn-book and spelling-book, English reader and *Western Calculator*, was thinned out to ten lads with Ross's *Latin Grammar* or Cheeve's *Accidence*, down to the day in 1831 when the thread of the story is again taken up, it is not too much to say that the institution had never known a day's peace. There was always something to threaten its continued existence, or to mar the harmony of its surroundings. There was never a day, nor an hour, when war was not in active preparation or actually waging, against it or against those having it in charge.

There was, however, during all that time one shaft of light piercing the gloom. The utmost harmony prevailed between teacher and teacher, teachers and students, and teachers and trustees. But that harmony is now about to be broken in all of its relations, and a succession of events to take place of such calamitous consequence as to cause the friends of the institution to despair of its life. It has been a question with me whether I ought or ought not to tell the story of that baleful time. All who were actors in those wretched scenes are dead, and of each I can say:

The good knight's sword is rust
The good knight's bones are dust
And his soul is with the saints, I trust.

But the story cannot *be* told and *not* told. The events to which allusion is made left a deep scar upon the history of the institution,

and a presentation of that history without showing the scar would by that much be an untrue presentation.

President Wylie, as has already been stated, began his labors here in the fall of 1829. With him were associated the Rev. Baynard R. Hall, professor of Greek and Latin, and John M. Harney, professor of natural philosophy and of mathematics.

How long the faculty as thus constituted worked together in harmony is not now certainly known. If we accept *The New Purchase*, Professor Hall's book, as authority, it would seem that it could not have been for long. But in the absence of corroborating circumstances, *The New Purchase* cannot be accepted as conclusive evidence of the truth of any matter connected with the subject under discussion, except as to admissions of bad conduct made by the writer, and sometimes of bad conduct by his colleague, Professor Harney. I refer in this connection to the first edition published in 1843.³

There are, however, circumstances that tend to support the *New Purchase* statement in this particular.

It has always seemed reasonable to me that Professor Hall should himself have aspired to the presidency of the Indiana College. He was a man of talent and learning, he was an able and eloquent preacher, and as principal of the Seminary he had acquitted himself well. Why not, he of all men, have indulged the aspiration?

We have his own statement to the effect that his name had been mentioned in that connection. "Distant and learned gentlemen to whom", he says, he had written inquiring after presidential candidates, had replied earnestly recommending himself, but he declined the nomination, "unwisely", however, as he seems afterwards to have thought.⁴ It is very true that his name seems never to have been considered in that connection by the trustees, and the evidence is moreover conclusive that both himself and Harney joined in

³In the second edition of *The New Purchase* (published in one volume, at New Albany, Ind. in 1855, by John R. Nunemacher), the treatment of this matter is very much curtailed and considerably softened. The motives underlying the alterations are indicated in a series of manuscript letters from Hall to Nunemacher, which recently came into the possession of the University by gift from Nunemacher's daughter. Under date of March 13, 1855, Hall writes: "In the work are here and there certain words and expressions that have caused me often much sorrow in remembrance, and I would have given many dollars if they could have been blotted out. And more especially there would be so manifest an unkindness in reprinting a vast amount of what pertains to the late President of a certain college, that I would nearly as soon consent to have a finger taken off as to continue that." Later he reminds Mr. Nunemacher that "all the chapters and passages in the second volume relative to Dr. Bloduplex (President Wylie) are by all means to be discarded." Professor Hall adds, however: "This gentleman richly deserved all that was done to him some years ago, but he is now in the other life, and I hope in a better one."

⁴*The New Purchase* (1843) II, 235-6.

presenting Wylie's name to the board; but for all that, Professor Hall was not the man to press his own claims. He was the man, however, to think that if he had any claims his friends ought to know it and push them for him without waiting to be set in motion by him. He was a man of lofty ambition, and he had come to the West five years before, as he tells us, to become a leader in its higher educational work. And so it is certainly quite reasonable to believe that he himself aspired to the position of president, and I think the circumstances warrant us in thinking that he did so aspire—a fact to be kept in mind in following the discussion of the subject before us.

Dr. Wylie was in many respects a remarkable man. He was born to lead, not to follow. The painting of him in the library shows that he had the elongated Andrew Jackson type of face and head. He possessed many qualifications that go to make the leader of men. He usually saw his way clearly and he went straight to his goal. The greater the difficulty, the more determined and the more certain he was to surmount it. What he lacked was in tact. He was not given to persuasion but to command. He never masqueraded. He might, indeed, admit that he was in the wrong. I find one instance when he seems to have done that, but he never sniffled over it. If he was right, those who followed him were sure to go right, for when once on the right track, he was sure to stay there. There was nothing vacillating or uncertain about him. After a fight was over, he never spoke ill of his enemy, but he was a good hater nevertheless. Taken all in all, he was rigid, masterful, and uncompromising.

Baynard R. Hall was in many respects the very opposite of Andrew Wylie. He was genial, jovial, and merry-hearted. He attended the frontier shooting matches and quilting frolics, and laughed with the loudest. He was a tactician and went around things. When the storm came, like the turtle in his shell, he drew his head in and waited for the storm to blow over. He was emotional, poetic, light-hearted, and took things easy. But he had a long memory. He never forgot nor forgave. He, too, was a good hater. Eleven years after he left the Indiana College a defeated, humiliated man, he wrote of the causes of his defeat and humiliation, with a pen dipped in gall.

John M. Harney, young and inexperienced as he was, already shadowed those qualities and characteristics that were to make him the great editor that he was destined to become. He was a silent man, an exacting man, a combative man, a patient man, a strong

man, an invincible man. Wylie and Hall were so unlike that they could never fight a pitched battle, for Hall would draw off his forces and treat for peace or abandon the contest entirely. But between Wylie and Harney there was great similarity. Both were pugnacious, and if there was any compromise in either it certainly never manifested itself in the great faculty fight of 1831-32.

Men admired the tall, graceful, grave, stately-stepping, and dignified Wylie. Men loved the blue-eyed, jolly, laughing, easy-going Hall. Men feared the erect, precise, nervous, heavy-jawed, firmly-stepping, neatly dressed, military-looking Harney.

I am slow to accept Professor Hall's statement that the trouble began quite soon after Dr. Wylie's coming. Still, the character of the three men and the complexion of the times in which they lived corroborate the *New Purchase* version.

But there is other and perhaps better corroborative evidence. The first catalog of which we have any knowledge was printed for the collegiate year 1830-31, and it was not written by a committee of the faculty, nor under the supervision of a committee. From language used in that first catalog, it is quite evident that the faculty as such had little or nothing to do with the domestic management of the institution; and the fact must, no doubt, have been a cause of irritation to the two professors, and especially so to Professor Hall, who had for so long a time been at its head and, as we have seen, probably been an aspirant for the presidency himself. In truth, Hall in connection with his statement that the trouble soon began suggests as a cause that, from the first, the president treated him and Harney as if they were no more than ushers in the school.

This view is corroborated by Dr. E. N. Elliott who, succeeding Harney to the chair of mathematics, was here from 1832 to 1836, and of course had excellent opportunity to learn all the facts. Indeed, he says that Dr. Wylie gave him a full account of these very troublesome times, and therefore, when I quote him, I do it with the understanding that I am giving Dr. Wylie's version thru Dr. Elliott's memory. This you will see is but hearsay evidence, but it is deemed relevant in the courts of history, if not in the courts of law. Dr. Elliott says:

As the trustees knew nothing about the management of colleges, and Dr. Wylie had had extensive experience in Washington and Jefferson colleges, he considered himself entitled to have a controlling voice in the management of the institution. This the professors resented, as it not only diminished their power but also the esteem in which they were held in the community.

In view of all the circumstances, I think it very probable that

trouble began in the faculty very soon after its organization, and both Hall and Elliott agree that it arose over the question of where the power of local government lay.

But there is another material fact to be considered in this place. A number of students followed Dr. Wylie from his Pennsylvania college, and between these and the students already on the ground there soon sprang up an intensely sectional ill-feeling. Professor Hall in his book hints at this, and all who were students here at the time with whom I have talked concerning it have proved it to be true. One man, now a venerable ex-judge of the state, said to me that, to add to the ill-feeling existing between the two factions, the "foreigners" were better dressed and had more money than the "natives", and withal were perhaps a little wicked; and that the girls of the village, attracted by these glittering parts, gave their smiles more freely to the former than to the latter. Some of you will perhaps remember that the statement was made last year, that in the beginning and up to 1832 there was but one literary society, the Henodelphisterian, connected with the institution; but in that year there was a withdrawal of members, who were mainly "foreigners", who founded the Athenian Society. The cause of this withdrawal may be seen in the jealousies between the "native" and "foreign" students.

It is remembered that the "foreign" faction began, shortly after their arrival, to find fault with Professor Hall. Their charge was that he was "indolent", "neglectful", "unaccommodating", and "incompetent". In the making of the charge, there seems to have been an assumption of superiority on the one side which was peculiarly galling to the other. At any rate, the other side most earnestly and indignantly denied that there was any ground at all for the charge. They, the old students of the institution, had learned to look with love and reverence upon their first professor, and we can readily imagine the bitter length to which such a controversy could be carried by the contending factions.

Professor Hall, no doubt, suspected from the first that Dr. Wylie inspired this student criticism, nor can there be much doubt that it tended to promote ill-feeling in the faculty at an early day, as claimed in *The New Purchase*, tho no open outbreak immediately came of it.

Out of this student factiousness came that which ultimately led to the first difficulty of which the public could get a glimpse. I refer to the anonymous letter. Sometime toward the close of the collegiate year of 1830-31, probably in September—which was nearly a year after Dr. Wylie came—Professor Hall found in his "pocket

Virgil, left as usual on the mantel of his recitation room", an anonymous letter, which taxed him in very plain language with the same charges current among the "foreign" students—incompetency and neglect of duty—and demanded his resignation.⁵

Hall and Harney both promptly came to the conclusion that Dr. Wylie was the author of that letter. The evidence of that fact was wholly circumstantial, it is true; nevertheless it appeared to be flawless, and was convincing to a moral certainty. "It was", says Matthew M. Campbell, who for so long a time was the worthy head of the preparatory department of both the College and the University, and who was a student here at the time the letter was written, and who for forty years kept the secret of the writer—"It was strong enough to hang a saint." The letter was written on Dr. Wylie's own paper, with his own ink, and in a well-simulated hand. "The style, the words, the expressions", the "grammatical peculiarities", were believed to be the Doctor's. But, as if to "make assurance double sure", the wafer or sealing wafer bore the *impress or stamp mark of Dr. Wylie's own desk key!* No wonder that Professor Campbell exclaimed that the evidence that Dr. Wylie wrote it was "strong enough to hang a saint!"

And yet Dr. Wylie did not write that letter. It was written by a Pennsylvania student, "without", as he himself says, "the knowledge, suggestion, remotest hint or suspicion" on the part of Dr. Wylie. I do not know that the Doctor ever knew who was its author, but I do know that he solemnly and indignantly denied its authorship to Professor Hall; and it would seem that Hall, at the time, must have believed him. But on the breaking out of fresh troubles, the solemn and indignant denial went for naught, and eleven years afterwards he painstakingly set himself to the task of proving that the Doctor was its author.

The letter led to Hall's resignation. "That very week", he says, he sent in his resignation, "offering however to remain till the meeting of the board". A partial copy of that letter, taken from the old record which was destroyed by the fire of July 12, 1883, still remains; and it is curious to note that he writes, "The sole reason for this offer is my dissatisfaction with the present salary attached to my office, and which, allow me to say, is a reason to be remedied by your honorable board if it desires to retain me in its employ."

This was certainly strange language to be used in the face of the anonymous letter; and I am unable to explain it upon any other

⁵ *The New Purchase* (1843), II, 230-1.

hypothesis, save that Hall was, for the time being, satisfied with the Doctor's denial.

The board accepted Hall's resignation, but made the usual mistake in such cases of requesting him to remain a year longer at a salary of \$750, to which he agreed, "unless an offer of employment came from elsewhere which he could not afford to neglect".

No further trouble is heard of for a period of about nine months. The fires were smouldering, however, and at the coming of the first breeze were liable to leap into flame. The breeze came in May or June of the following year (1832). The occasion was a spring exhibition. Exhibitions were important affairs in college life in those days. Orations, declamations, debates, essays, and dramatical performances were the exercises usually given. Whole days would sometimes be appropriated to an exhibition. I found an account not long ago of one given by the students of Franklin College, during the early period of its history, which occupied the better part of two days, and they did not charge an admission fee either.

Alas! Alas! One by one the cherished customs of the Fathers take their flight and come back to us no more, forever. The old-time spring exhibition, with its odor of cedar browse, its thunder of the bass drum, its marchings in of the College societies, its warm and fervid oratory—who that ever spoke his "piece" at a spring exhibition and received heartier applause and more of it than ever afterwards he received, can forget the occasion of his greatest victory!

The Indiana College spring exhibition was a less elaborate affair than the Franklin one of later date. It consisted of orations only, and probably it was put by in half a day. At any rate, it was held in the then newly-built Presbyterian church on the corner of Fourth and Washington streets. It is now occupied by the Baptists and has been rebuilt on the old foundation. Portions of the old walls have been built in with the new as is plain to be seen by any passer-by.⁶

The new church was then unfinished, and it may serve as a bit of local coloring to the history of the times to state that the carpenters were at work on the inside finishing, and that all save one abandoned their planes and saws for the exhibition. Their benches were pushed to one side and the floor was swept clean. One grim old carpenter engaged upon the work, who was a Presbyterian as well and held that the fiddle in the church was an abomination, declared his unwillingness to lose his day's work. The exhibition could go on if its promoters chose, but he was going on also; and so he planed

⁶Since the delivery of this address, a stone church building has superseded the brick one known to Judge Banta.

away. His bench stood next the north wall; and as the auditors came in, the first things that caught their eyes were the long ribbons of wood curling from Carpenter Clark's sharp plane.

Presently the procession from the College, composed of musicians, faculty, officers, students, and citizens came filing in. There was a triangle, a fiddle, a bass viol, a drum, and a clarinet. James W. Whitcomb, a brilliant young lawyer of the town and subsequently a governor, a United States senator, and a foreign minister, played the fiddle. John Orchard, one of the proprietors of the Orchard House and a pillar in the church, played the bass viol; and Austin Seward blew on the wind instrument. Who struck the triangle and who the drum, the muse of history does not record.

The boys applauded the carpenter, of course, but he kept planing away. As the house filled up, the last to come in found seats in the rear, where the curling shavings and the dust and slivers alighted on the gowns and spring bonnets of the Bloomington matrons and maidens. At once a vigorous dusting of gowns began, accompanied by remarks that doubtless made the carpenter's ears tingle. Meanwhile the boys kept on applauding. The commotion catching the president's attention, he arose, and looking in the carpenter's direction, and assuming an air of amazement, he exclaimed: "What does this mean? I wouldn't be more surprised at the sight of a wild bear from the woods!" The carpenter could stand it no longer. A proposition had been made by Mr. Orchard and others to pay him his day's wages, which he now gladly accepted; and dropping his plane he left the house and the exhibition went on.

There was a students' temperance society in existence here at the time, the members of which elected one of their number, Samuel Givens, a fiery Kentuckian, to represent them on the occasion. Givens requested that he be permitted to speak either first or last, and Dr. Wylie agreed to his request; but when the program was made out the Doctor, forgetting the request and his promise, the temperance orator was assigned an intermediate place on it. Because of this, Givens declined to appear, and when his name was reached Dr. Wylie rising said, "I see that the gentleman is absent for reasons which I suppose *he* may deem satisfactory"; and he called the next speaker.

"It was the rule then that students were called upon in chapel Saturday mornings to give in public their excuses for any absences or failures in duty that had occurred during the week. Accordingly, Givens was called upon to account for his absence at the spring

speaking." He answered, giving as a reason that he did not wish to speak unless it was first or last, and referred to the promise that had been made to him in that matter. The president admitted the promise, but said he had forgotten it until it was too late.

But the young man was not satisfied. With an impertinence that is astounding to us, but which no doubt came of that factious spirit so prevalent at the time among the students, he gave the president to understand that *he* was not at all satisfied with *his* explanation. The Doctor, with a spirit of patience that it seems to me was remarkable in him, again stated that it was true he had made the promise, but he had entirely forgotten the matter when he came to make up the program, and continuing he asked this question, "Would any gentleman under the same circumstances and the circumstances known to him act as you have in this matter?"

Springing to his feet the young man tiptoeing said, "I would, sir!" "Then", replied the Doctor, "you would be a very mean man", or as another puts it, "You would act very meanly."

The impertinence of Givens could not very well be overlooked and something had to be done. Professor Hall says that the Doctor on his own motion pronounced an "immediate sentence of dismissal" of the "noble and ingenious young man"; but no corroborating evidence exists. That the faculty disagreed as to what the discipline should be, there is no doubt; and it is very reasonable to suppose that Wylie was in favor of extreme measures while Hall and Harney were in favor of mild. Givens evidently belonged to the student faction that was favorable to the professors and was getting in his "lick" at the president.

Now followed one of the most remarkable proceedings to be found in the whole range of modern college annals. It was neither more nor less than an appeal of the case by the faculty to the students. Both McPheeters and Bollman, as students "trained" in opposite factions, always represented that the faculty submitted the case to the students by agreement; and Campbell writes of it as an "open appeal by the faculty to the students". On the contrary, Hall writes that both himself and Harney were greatly surprised when, on what was long known as "the celebrated Saturday", Dr. Wylie brought the matter to the attention of the students; and while the case was, in a sense, appealed to the students, I cannot believe, in the absence of the actual statement of someone present in faculty meeting, that such an appeal was the result of an agreement made beforehand.

But we are not entirely left in the dark as to the Doctor's motives and purpose. According to Dr. Elliott, Dr. Wylie proposed some measure affecting the College government—he does not state what, but it was probably the expulsion of Givens—"which was openly opposed by the professors and their party", their party consisting of all citizens and students who sided with them. "Anxious to enlighten the community and the students, he was discussing it in the chapel", when the circumstances as hereinafter stated took place.

Be all this as it may, sometime between the day of the spring exhibition and July 16, 1832, came "the celebrated Saturday".

Mr. Bollman—who came to Bloomington from Pennsylvania with Dr. Wylie and took his course in the College, and was ever Dr. Wylie's fast friend and not the friend of Professor Hall, for he spoke bitterly of the latter to the very last—said on one occasion that on the morning of "the celebrated Saturday", he was sent for by the president to meet him at his house before the ringing of the bell; that he did so, and there met a number of other students. The ringing of the bell was begun about the time he got there, and before or at its close Dr. Wylie said, "Well, it is time we go to College."

Hall makes the charge in his book that the president came to chapel that morning with a "bodyguard", and Bollman understood that he and others had been invited to assemble for some such purpose. The evidence is conclusive that both sides met that morning in the belief that something unusual was about to take place; and the inference is very strong that shortly before that the feelings of both Wylie and Harney had been wrought up to the highest point of malignancy toward each other.

As to the cause for the particular enmity now existing between these two, I am not certain. Harney had from the beginning of the quarrel espoused Hall's side; and now that Hall's days as a professor were numbered, it may be that Wylie and Harney had mutually entered the lists for a death struggle. In *The New Purchase* it is stated that the president on his own motion expelled Givens, but that Harney advised the student to disregard the president's act on the ground that the faculty alone could expel, not a member of the faculty. Be this as it may, on assembling that Saturday morning the faculty took their places on the rostrum, the president in the middle and a professor on each side as usual. The president read a chapter and offered the usual morning prayer, after which the unusual scene began.

It began by the president making a speech. Two versions of that speech are before me. One is the *New Purchase* version, which is too

extravagant for credence. The other is Matthew M. Campbell's version. After the lapse of fifty years, he undertook, as he says, "to give something like it". In one thing both agree—the president assailed Professor Harney. The *New Purchase* statement is that he charged him, by innuendo, with spitting in his face, but from no other source comes even a hint of this, and so we discard it entirely. Whatever ground that speech may have covered, of this we may feel assured, Dr. Wylie did not spare his enemies—the professors. During its delivery we may well suppose that, as Hall says, the "professors sat as in a dream". Presently the one thing occurred which everyone present no doubt remembered to the day of his death. Harney was sitting with a pen-knife in his hand—a "little pen-knife" said McPheeters; an "old pocket-knife" with a "round-ended blade", says *The New Purchase*; "a new knife with a very glittering blade", says Dr. Elliott, who got his information from Dr. Wylie; and simply a "pen-knife" says Campbell. He was "whittling a stick as was his custom", says McPheeters; "he was opening and shutting it just that its click, as I think, might somewhat divert his own riveted attention", says Campbell; "he was snapping it open and shut", says Dr. Elliott; "as was his habit, when having nothing to do, he began strapping a round-ended blade of an old pocket-knife on his boot—said boot tastefully reposing on the knee of the other leg", reads *The New Purchase*.

Here you see is a disagreement among the witnesses, but it is as to a minor matter. As to the essential facts that there was a knife displayed by Harney, and that it was not a deadly weapon, there is entire agreement.

But the president saw that knife, and actually fearing or feigning to fear an evil intention on the part of Harney, he exclaimed against it. "What! Does he mean to stab me in the back while I explain to you his late conduct with me?" is Campbell's statement; while McPheeters' is, "I see a knife behind me here, but I hope it is for no evil purpose!"

A commotion followed. Harney sprang to his feet, but Hall seizing him by the skirt of his coat pulled him back into his seat, at the same time telling him he would speak in answer. The president went on with his speech and no quarreling, as such, ensued. Campbell even thinks there was no great excitement evinced by the students. Doubtless they kept their seats and certainly they did not applaud.

When the president was thru, Hall arose and began his answer. What he said no one has assumed to repeat, but there is evidence

that he began the making of a very exasperating speech. McPheeters says that Hall "was a brilliant orator and in the language of the boys he 'ripped the Doctor up the back' ". At any rate, his words greatly enraged the president, who called upon him to curb the temper of his speech or he would dismiss the College. But Hall, paying no attention to the threat, kept right on, when Wylie, advancing to the front, cried: "College is dismissed. My friends will follow me!"

With that there seems to have been a rush for the door, and when outside, the president's friends followed him, and the professors' them. Some who held aloof from either faction, lolling on the grass in the shade, talked the extraordinary occurrence over.

This is the story of "the celebrated Saturday", as I have been enabled to weave it out of the tangled skeins that have come down to our time. In *The New Purchase*, Harney is represented as denying in the most positive of terms any wrong purpose with reference to his knife, and I have no doubt he did so, for it was most natural he should; yet while everyone whose statement regarding the matter I have taken hastens to acquit Harney on that score, not one remembers him as saying a word at the time.

Events now followed in quick succession. On July 16 we find the board convened in extraordinary session. Professor Hall, as we have seen, had already resigned but was teaching under a special agreement. He no longer appears as an actor in these disgraceful scenes. Henceforth the battle was waged between the president and the mathematics professor. Each went before the board, and each presented his side of the case and demanded an investigation.

What was the board to do? There was no precedent. The like had never been known before. For three days the board doubted, and on the third it straddled. By resolution it declared that the "conduct of *each member of the faculty* has not been free from censure", and wound up by recommending the members "to make every consistent effort to arrive at perfect harmony among themselves"; and then the trustees adjourned and went to their homes.

The advice was good, very good; but the time for advice was passed. What the parties wanted was a trial; what the board could not afford to give was a trial. There is but one step that can be taken with absolute safety to an institution in such an emergency, and that is to cut off somebody. No management can with safety to its college sit as a tribunal to condemn or to vindicate its quarreling professors. Other tribunals, lay and ecclesiastical, have been specially ordained for that purpose.

Certainly no darker hour was ever struck in the history of our beloved institution. The factional differences between the students had become so intensified as alone to be a sufficient cause from which to apprehend a disruption. Hall, it is true, says the students "generally remained neutral", but he charges that all the "flourishing ornamental trees set out by him years before" were girdled; that the beautiful woodbines shading his doors and windows were cut down, and that the swine were turned into his kitchen garden—all of which he lays to the door of the adverse student faction.

That the students were wrought to a high pitch of excitement cannot be doubted; for when the time came, as it shortly did, that the professors had to go, the number of students that turned their backs upon Indiana College was so great that Dr. Maxwell, the president of the Board of Trustees, in his next annual report to the legislature, felt it his duty to call attention to the fact.

In addition to these agencies of disturbance, we must not overlook the fact that the people of Bloomington took sides and helped carry on the war. Fortunately, however, with them there was division—a division which goes far towards sustaining that deliverance of the board that the "conduct of each member of the faculty has not been free from censure". To such a pitch was the contention carried among the citizens of the town that, according to Dr. Elliott, who succeeded Professor Harney in the chair of mathematics, the social life of the people for the time being was made to hinge upon the faculty controversy. The friends of the one side held no social intercourse with the friends of the other side. The social parties were either Wylie parties or Hall and Harney parties.

And yet, to the credit of president and professors be it said, that after the board had given its bit of good advice and gone home, the College work went on as if all were peace and harmony in that little College world. Commencement day came on the last Wednesday in September of that year, and until that time president and professors met in the chapel each morning, when there was reading of the Scriptures and prayer, after which followed lectures and recitations—all as of old. Everything was done in decency and in order, and a stranger would never have dreamed of the tempests of ill-feeling raging beneath the surface.

It is quite evident, however, that the disagreeing faculty were not taking the good advice of the board. They never do in such cases. Out of doors all was discord and confusion. Sometime during the interval between the July meeting and the September commencement, the president and the mathematics professor had a personal collision,

but the event had more of the farcical than the tragical in it. The story is about as follows: That stream which crosses the city school lot and is so nicely concealed beneath College avenue by an arch of masonry was at the time in question an open stream from street boundary to street boundary, save that it was spanned on the west side by a foot-log. One Sunday morning the president and the professor met at that foot-log. The president fancied, and doubtless his fancy was the fact, that the professor was measuring his steps so that the meeting should take place midway of that log, and if the truth were known, it would doubtless appear that the president was not just then caring whether the inevitable meeting took place on the log or off it. At any rate it is certain that he did not change his gait. He left it to the mathematics professor to do the necessary fast walking and slow walking, in order to bring about the meeting in the most desirable place. And the mathematics professor was a very capable and practical mathematician, and he so managed it that each stepped upon his end of the log at the same time. But the president had been thinking as well as the professor. "I made up my mind", said he sometime afterward to *our* Dr. Wylie (Professor Theophilus A. Wylie), "that I would push him off if I could"; and it was characteristic of the old Doctor that when he once made up his mind to do a given thing, he was very apt to do it. At any rate the parties met in the middle of the log, as the mathematics man had calculated they would; and "just as we came together", said the *old* Doctor to the young Doctor, "I drew my arms close around me and gave him a hunch with one shoulder, and off he went sprawling".

Had the mathematics man seized his antagonist by the leg and dragged him down into the mud and mire, we might have had more respect for him!

Commencement fell this year on the last Wednesday in September. There were two terms a year, of five months each, with two vacations of a month each, one covering the month of October and the other the month of April. From the beginning up to this year of 1832, the collegiate years closed in the last of October, and the vacation months were November and May.

Whether the trustees were astonished at the continued hostility of the main actors in this drama, on their assembling at the September commencement, is nowhere stated. We learn from Dr. Maxwell's report to the General Assembly that Hall had withdrawn two weeks before commencement, but no reason for this is given. We can only suppose that the position he occupied had become so in-

tolerable to him that he sought relief by abandoning the field. He was a man of peace, who took no pleasure in war.

Another effort was made to effect a reconciliation between Wylie and Harney, but with no better effect than the one of six weeks before. What would the trustees now do? The entries in the old record are in general brief and often unsatisfactory. Enough, however, was written to show the great strait in which the trustees now found themselves. They were evidently doubting. In July they had declared both parties in the wrong; and as nothing had taken place to warrant a reversal of that opinion they must have still considered both parties in the wrong. This is evident, or else they would not have again counseled a compromise.

Again, professors were harder to come at in those days than they are now. Let one drop out today, and tomorrow twenty will be found ready to take his place. It was otherwise sixty years ago. Men competent to fill presidents' chairs, and to teach Greek and Latin and the higher mathematics, generally lived on the other side of the Alleghanies. If either Wylie or Harney went, who could be found to supply his place? Hall was already out, and a Greek and Latin man had to be found; and the board shrank from the task of finding still another. One at a time was enough. Moreover, as neither the president nor the professor would resign, and the board had declared both in fault, how could one be taken and the other left?

To this, add the clamor from the outside. The president had his friends, and the professor his. The town was in a tumult. Everywhere was confusion. When the pinch finally came, the trustees themselves could not agree. Tradition says that scarce two thought alike. The matter was talked over and over, and proposition after proposition was made, but nothing could be agreed upon. At last the keynote was struck by the humblest member of the board. He is represented as saying:

I am not a lawyer, nor a doctor, nor a preacher, and I know next to nothing about public business; but if I had two good hands employed on my farm and they should quarrel and fight, I would do my best to have them make it up; but if after a fair trial I found they would not have peace, I would consider which one I could get on the better without, and would dismiss him at once.

And Harney was dismissed.

The black cloud which arose with the beginning of this faculty fight now hung like a pall over what many thought was a dead College. No other calamity, whether from fire, or adverse litigation,

or political or sectarian ascendancy, or what not, ever proved so great a calamity to the institution as did this wretched personal difficulty. It had done more in the short space of twelve months to chill the ardor of state effort in the cause of collegiate education than all the assaults by politicians or sectaries from the outside were ever able to accomplish. The unseemly and disgraceful squabble was carried on, in spite of official admonition, until it became a state scandal, and until it put an effectual end, during that generation at least, to any thought of state aid to the Indiana College. I think it safe to say that never at any time since the culmination of that petty quarrel has the institution had as many active and coöperating friends thruout the state, in proportion to the whole number of people, as it had before. Up to that time it had been the hope of Dr. Maxwell and other far-seeing men, that the Indiana College should be to Indiana what the Michigan University has since become to Michigan; but it was soon seen, after the close of that deplorable dispute, that whatever the future might have in store for the scion of their planting, that hope could not become a reality during their generation.

I realized in the outset the gravity of the task I had undertaken. We are not so far from the actors and their times that a matter of such a personal nature as the one presented can be probed without danger of hurting somebody.

It may be said that the matter presented in this paper is but an episode that ought to be forgotten. But history is largely made up of episodes, and especially is this true of the history of our institution. And it is true, moreover, that every single episode has in its composition more or less of the unpleasant because of personal matters; and so if we were to leave all out that is unpleasant, we would have left very little that would be worth recording as history.

I have not felt that it was any part of my duty to find which side took the initiatory wrong step, nor which went to the greater length in the wrong. A review of the evidence at hand warrants me in believing, as the Board of Trustees believed at the time, that neither side was without fault. As to the relative degrees of wrong the board expressed no opinion, and neither do I.

But looking beyond all that—whether Dr. Wylie was to blame or not to blame; whether Hall and Harney, or Hall or Harney, were to blame or not to blame—one fact stares us in the face, and that is that their personal controversy worked a grievous wrong to the institution.

In everything a man does, he may be said to appeal to history

and certainly this is true of every man who engenders or wages a faculty war. It is a war out of which no soldier ever comes unhurt, and for which hurt no soldier ever receives a pension.

The board proceeded at once to the reorganization of the faculty by the election of Beaumont Parks, who was at the time at the head of a classical school in Madison, in this state, to the chair of languages; and Ebenezer N. Elliott, who was at the head of a similar school at Rising Sun on the same side of the river, to the chair vacated by Professor Harney. And then the board adjourned, in the belief that the College was dead. Nor did it again meet for two years. That was the period known as the interregnum.

V. FROM COLLEGE TO UNIVERSITY (1833-38¹)

THE STORY of the Indiana College as thus far told on Foundation Days has been brought down to the close of the "faculty war" in 1832. It begins today with the reorganization of the faculty.

Dr. Wylie was continued as president at a salary of \$1,300, and Beaumont Parks was elected to the chair of languages and Ebenezer N. Elliott to that of mathematics and natural philosophy, each at \$750 per year. Both were taken from Indiana schools, Parks from the head of a classical school at Madison and Elliott from the head of a like school at Aurora. The former was Connecticut born, and was educated at Dartmouth; the latter was a South Carolinian, but came to the Kentucky side of the Ohio valley in boyhood and was educated at the Miami University.

The Greek and Latin professor is remembered as much for his eccentricities as for his learning. He was seldom or never without his "quid in his mouth and was always begging for tobacco". He did all sorts of unexpected and astounding things. In the middle of a recitation, without a word of warning, he would spring to his feet with the announcement that he must go home and kill a chicken for dinner; and off he would go, not to return till the next day. Happily the tribe of eccentrics has about disappeared from the western colleges—a fact that would seem to indicate that there must have been a deal of *simulated* eccentricity among the college men of old.

Professor Elliott moved in the usual orbit, except that he was endowed with an inordinate egotism. He still survives, or did a few months ago; and I think you will agree with me, when you have heard his own account of some of his achievements while a professor

¹Delivered in the Presbyterian Church, Bloomington, Indiana, at the annual Foundation Day exercises held January 20, 1893.

in the Indiana College, that he is in his old age—whatever he may have been when a younger man—most delightfully self-conscious of the importance of his own acts.

Thus far the history of the institution had had in it more of disappointment and failure than of success and triumph. Nevertheless, it had met with its successes; and in spite of all its drawbacks, past and to come, it was destined in a very few years to attract the general attention of the country and draw students to its classes from all over the West and South.

It is not to be supposed that the new faculty entered upon their duties in the belief that the evil days were past and that there was to be no more war. Too many battlefields were still in sight, and too many old soldiers who had fought for or against the College on these fields survived, for that. A generation—yes, two generations—must step down and out before there could be a perfect peace. The old politicians and the old ecclesiastics must all give place to the new before the Indiana College battles were to be no more. Still, it is a reasonable conclusion that the "faculty fight", which was the theme of the last Foundation Day's paper, was not an unmitigated evil. It had its one compensation at least, for while the internecine strife went on the foreign enemy stood aloof observing the strictest neutrality. After the domestic broil was over the attacks from the outside came with such lessened vigor as to indicate a permanent weakening in the ranks of the enemy. Battles were still to be fought in defense of the State College, but the issue was never again to be so doubtful as it had been in the past.

When the new professors came, in the fall of 1832, they found the people of Bloomington in a state of angry discontent. They had very generally taken sides in the faculty controversy, and altho Hall and Harney were gone, leaving Dr. Wylie as the only one of the original combatants to occupy the field, the two factions were not ready to cease the warfare. The population of the town did not exceed six hundred; but six hundred soldiers, it must be conceded, can fight a stout battle. Theirs, it must be remembered, was a very combative age. Everybody in those days was ready to fight with tongue, pen, fist, or sword, on the slightest provocation. If you will take the pains to examine the old court dockets of any of our counties, you can see from the great plenty of slander cases and assault and battery cases how very pugnacious the Indiana people were.

The people of Bloomington were no worse and no better than were their neighbors in this respect. When the faculty contest

began, they joined in with a will. But when the principals in that unhappy affair ceased their strivings, their valorous adherents were hardly ready to cease theirs; and so the warfare continued, between the Hall and Harney faction on the one side, and the Wylie faction on the other.

The people of Bloomington were a social people in those days, and in this way they were much like their neighbors, for sociability was a characteristic of the times. The people of the towns were much in the habit of meeting around the hearthstone and of eating and drinking and making merry. But here in Bloomington the suppers were Hall and Harney suppers, or else Wylie suppers. An adherent of one faction was seldom or never a guest with the other. Indeed, Professor Elliott says in so many words that, when he arrived, so bitter was the feeling between the two factions, "no individual of the one party visited, or even spoke to one of the other party".

This state of affairs must have been intolerable to the new professors; and one of them at least, according to his charmingly gossipy story, determined to put an end to this social thralldom for his own and his family's benefit, as well as for the benefit of the College. He exclaims:

Fortunate it was for me *and for the College*, that my wife, whom I had just married, had been reared in the best society of Kentucky, and that Bloomington was somewhat numerously settled by Kentuckians, and that Noah Noble, the governor of the state, was a Kentuckian and a neighbor and a playmate in childhood of my wife's. This gave us an entrée to all the society which Bloomington could boast. A succession of entertainments followed [his coming, which was just sixty years ago the fourteenth of last month] and many shrewd speculations were indulged in as to which party the new professors and their families would attach themselves to. I had brought out with me two young ladies, nieces of my wife.

The townspeople representing both factions had done the handsome thing by the new members of the faculty, and it now became their duty to pay their debts. "Mrs. Wylie", continues the chronicler, led off by inviting the Doctor's friends only. Mrs. Professor Parks followed by inviting the same, and both entirely ignored his enemies."

It was now the turn of the mathematics professor and his wife, and there was much discussion between the two. After the lapse of sixty years the matter seems trivial enough to us, but as a result of that discussion it was determined, writes our chronicler, "to ignore both parties and invite all, and make the resuscitation of the College the paramount object". And so all were invited—Hall and Harney

retainers and Wylie retainers—and all came; so that the mathematician's parlor (to use his own language) was "crowded by both parties, but on opposite sides of the room, glaring at each other and wondering what next".

Well, *what* next? Let us have the story to the end without break or comment.

My wife had marshaled her forces, her two attractive young ladies, her nieces, some Kentucky students, and as auxiliaries her Kentucky friends in town. The object was to mingle the heterogeneous factions and transform them into a homogeneous whole. Much as I had admired her before [they had recently been married], she that night excelled in entertaining anything I had thought possible. She and the young ladies were everywhere; she had a word or a repartée for each one; and she so managed that, by the time supper was announced, her guests were pretty thoroughly mixed. These tactics were followed up by a judicious round of visits and invitations to call. This was the deathblow to partyism; and from that time the institution started on a new career of prosperity, so that when our trustees returned, after a two years' absence, they found the College, to which they had as they thought bidden an eternal farewell, flourishing, the new building finished, the chapel complete with rostrum and orchestra, a fine brass band, two society halls, and (best of all) a large increase of students.

As a bit of local coloring the story as told by Professor Elliott could not be overlooked, but the results of his and his worthy wife's diplomacy were hardly as great as he would have us believe. The finished building, the completed chapel and rostrum and orchestra and the brass band and society halls and increase of students, were due to causes other than that supper. In a word, the supper did not save the College; nevertheless the social life of Bloomington, and of all those connected with the College, too, for that matter, was no doubt greatly benefited by it. It was the beginning of better things, and by reason thereof deserves to be remembered. Still the revolution it set in motion was not instantaneous, for as late as 1838 the Hall and Harney and the Wylie factions were still making themselves felt as factions in the social life of Bloomington.

Let us turn now to matters of a graver nature.

The year after this institution had been made a possibility by the constitution of the new state of Indiana, a new disease which was in a very few years to prove a scourge to mankind the world over began to attract the attention of the medical profession of the civilized world. The year after the institution passed by legislative enactment from the Indiana Seminary into the Indiana College, that fever-disease passed beyond the confines of its Asiatic home and entered Europe. The next year (1831) it touched the coast of England, and on June 9, 1832, cholera for the first time found a foothold in the

New World. This was at Quebec; and in thirty days it was claiming its victims in Chicago! On June 24 it broke out in New York, whence it swept like an ocean storm to Philadelphia, Washington, Baltimore, and to other towns on the Atlantic side of the Alleghenies. In September it runs like lightning up and down the Ohio. Cincinnati, Lawrenceburg, Madison, Louisville, Evansville—all are stricken, and the mortality is great and men fear and tremble.

As the cry of anguish goes up from the people of the river towns, "See!" exclaim they of the interior places, "it clings to the waterways!" and they regain their courage.

With the coming of the October frosts the scourge suddenly disappeared, and it was devoutly hoped that it would never return. In the long winter evenings that followed, the people around their firesides recalled the horrors of the visitation and the striking incidents of its year. Not the least of these was the fact that the winter of 1831-32 was the coldest that the people of Indiana had ever known; that the following spring was extremely cold and backward, and the summer noted for the absence of sultry weather. There were those yet living who remember the extraordinary fact that in the harvest field that year laborers were compelled to keep in motion to keep comfortably warm.

And it is moreover on record, that the floods in the Ohio valley reached a higher level that spring than had ever before been known—higher by eight feet than the great flood of 1826, and higher by nearly six feet than the still greater of 1815.

As the people sat around their firesides of the long winter evenings and talked of frost and flood, of summer cold and stalking cholera, they wrapped themselves in the mantle of their own fears and waited forebodingly for the worst. And the worst for Indiana was yet to come.

On April 27, 1833, the Indianapolis papers announce that the "frightful disease" has again made its appearance in Cincinnati.

Once more does this pestilence stalk at noonday up and down the Ohio, smiting with death the inhabitants as it goes. It menaces the interior places as it had not done before, and finally leaving the river basin it flies like a destroying angel southward, thru the bluegrass towns and on down into the Tennessee country.

All this was going on in May and June, and toward the last of the latter month the alarm began to spread to the Indiana towns; and tell it might, for they in general were as void of sanitary regulations as were the Potawatomi villages on the border.

In Evansville the people were using and drinking stale river

water from old whiskey barrels, and everywhere the public squares and the streets and the alleys were the receptacles of garbage and all kinds of litter and filth. The wells in general thruout the state were shallow, and usually curbed from bottom to top with wood; surface drainage was scarcely thought of, and the vaults in the villages were in little if any better condition than they generally are today.

In Indianapolis June 26 was observed "as a day of special fasting and prayer", and a public meeting was called to consider the situation.

In Bloomington they neither prayed and fasted nor called a public meeting, so far as I can learn, but waited—and hoped that the pestilence would pass them by.

On June 29, the Indianapolis *Journal* assures its readers that all is still well—that while there are sporadic cases occurring in various places, cholera "is not yet prevailing as an epidemic".

On July 7, the editor exclaims, "Indiana thus far most mercifully spared!" But in a postscript—for editors wrote postscripts to their editorials and even news items in those days—he says, "We understand that cholera has broken out with great violence at Salem." And so it had. Eight days before the editor seems to have heard of it, it had "assumed a malignant form" in that unhappy town, according to what is now known. And now the pestilence was abroad in Indiana's interior places, and "terror and consternation" to use the language of another, everywhere prevailed.

Two centers of attack were made, one in the eastern part of the state and the other in the southern. At Greensburg, a small village of a few hundred inhabitants, 30 deaths occurred in a few hours. Out of a population of 150 in Newcastle, 16 fell victims. The mortality was less at Richmond. In the south, the severest sufferer was Salem. Here the mortality was appalling. In the town 65 died and 48 in the country round about, 113 in all. From Salem it marched to Paoli; it is next heard of at Bedford, and thence it passed on to Bloomington.

On Saturday morning, August 9, as certain ten-o'clock churchgoers passed the residence of Mr. George Johnson, on the southwest corner of the square, on the lot now occupied by the First National Bank, Anneka, the colored family servant, was seen gathering fuel to start the dinner fire. At two o'clock, the same churchgoers, and other persons, were giving her a hasty burial. Between the hours of 10 a.m. and 2 p.m. she had been stricken and had died of cholera, and her very hurried funeral testifies to the extreme alarm that had possession of the town.

The same afternoon a student by the name of Huntington, from Indianapolis, was attacked and died during the night. He was buried early the next morning, the faculty and most of the students attending the funeral. Mr. William McCollough, a prominent citizen, died about the same time, and others followed in quick succession.

All was now alarm and confusion. A few families fled the town, one in particular seeking safety at Ellett's tavern on the road to Gosport. But on reaching the place, the landlord and his wife were both found in the agonies of death from the dread disease.

All College work now ceased, and the great majority of the students left at once for their homes. Says the venerable Judge Roache, who was here as a student at the time, "Those who were able to secure conveyances or horses went in that way, but my recollection is that the great majority could not secure any sort of conveyance, and in their wild hurry to escape from the pestilence left town on foot." On their leaving Dr. Wylie admonished them to pursue their homeward journeys leisurely and cheerfully. Three Indianapolis students, Judge Roache remembers,—Hugh O'Neal, who afterwards became somewhat celebrated as a lawyer, David Beaty, and a young man by the name of Pogue, who belonged to the family of that name which is reputed to have been the first to settle on the after-site of Indianapolis—made the journey as far as Martinsville afoot. As they passed a residence a mile north of town, they were observing President Wylie's admonition to pursue their homeward way cheerfully, by shouting "Good-bye cholera! Good-bye cholera!" Shortly before reaching Martinsville they were amazed at finding that the pestilence was hard on their track. Young Pogue was stricken down and died in that town. No other deaths of students are remembered. Quite a number of citizens of the town and of the country round about died, but the pestilence soon abated.

A vacation of two weeks was announced at the time the students left, but we learn from the *Indiana Democrat* that the president of the College, toward the close of the month, gave notice that work would be resumed in the institution on the first of September. The announcement contained the cheering intelligence that the plague had run its course in Bloomington, and that general good health once more prevailed.

Commencement day came that year on the last Wednesday in September. Two-thirds of August had been lost, but there was no postponing of the day of commencement on account thereof. It is remembered, however—and it shows the severe notions that college

men entertained in those days concerning fidelity to what they considered their trust—that the time was made up the following collegiate year by a shortening of the fall vacation by three weeks.

Commencement was held that year in the new chapel, and three names were added to the roll of Alma Mater's alumni. Says Dr. Elliott:

The commencement that year was held in the new chapel, and the orchestra was composed of two flutes, one of them cracked. Imagine the discord. Dr. Wylie whispers to a professor, "What makes more noise than a pig in a gate?" Reply, "I give it up." The doctor, turning his thumb towards the orchestra, says, "Two of them!" This orchestra led to the formation of the first band in the College. It was organized by Professor Elliott and Mr. Seward, the blacksmith, and met weekly for instruction and practice in the recitation room of the former, who was its president until he returned to the South.

So many episodes that touch upon the history of the College and of the times during this period beckon to one for attention that it becomes difficult to make a satisfactory selection. There is one, however, that was so peculiarly the product of the age, and came with such threatening to the life of the College and yet, comet-like, passed it by with so little harm, that I feel justified in selecting it to complete this paper.

In the early period of the state's history men fairly deified labor. The most desirable quality a man or woman could possess was the power and the will to perform manual labor. The young man who stood at the head as a railmaker, or a woodchopper, or the like, was in general hard to turn down in the esteem of the fathers and mothers who had marriageable daughters. And so the young woman who could spin her eighteen or twenty cuts a day, and weave the fall web of jeans, and dip the winter candles, and the like, was quite sure of not being overlooked by the able-bodied railmaker or woodchopper.

The supreme mission of men here in the West in those days was to subdue the forest and surmount the physical conditions that obstructed their way; and this they could do, and only do, by the exercise of physical prowess. Hence they enthroned labor and made it the chief thing.

For this cause the man who was disabled to such an extent that he could not engage in manual labor—who was lame, too fat, too feeble, had the phthisic or had fits or was too lazy to work—well, they usually made schoolmasters out of these, and thus got what good they could out of them.

All professional men—lawyers, physicians, and preachers—who did not show a willingness on occasion to turn their hands to what

was denominated in the vernacular of the times as an "honest employment" were very much in danger of being placed under the ban.

There was more reality in this than we are nowadays apt to think. Thirty and forty years ago the Indianapolis banker deemed it morally hazardous to lend money to a business man who would go hunting or fishing. Mr. Dunn, in his history of the slavery episode in Indiana, tells us how Jonathan Jennings secured his first election to Congress. He saw that if he would succeed it must be thru the votes of the men living in the eastern part of the state, so, mounting his horse, he rode into those parts. The first men he met were at a log-rolling during the morning hours. Not one did he know of the sturdy log-rollers, and no one knew him; nevertheless he dismounted and took his place in the rank with a hand-spike, and rolled logs all day with the best of them. By night all knew him and were for him, and thence his fame went forth till all in eastern Indiana were for him, and he was elected and Indiana was made a free state.

Out of this reverence for labor came trouble to the schools, and especially to the Indiana College. There was a very general sentiment prevailing that education and manual labor ought to be married, and two of our colleges—Franklin and Hanover—sprang from that kind of a union. An effort was now made to degrade the Indiana College by converting it into some sort of a labor institute. The pressure was so great that the governor of the state felt called upon to refer to it, but he advised that nothing be done unless it should first meet with the approval of the College management.

Let us, however, listen to Dr. Elliott's story of the matter, for had he not seen fit to contribute it nothing scarcely could ever have been known of it, for the legislative records of the times were framed apparently with a view to concealing what was done, rather than making it known.

This was the era of the "manual labor" craze in colleges. It was believed that by working certain hours per day on a college farm, a student could not only support himself but pay his tuition; acquire an education, but also lay up money; and some colleges tried it, and we had to take our turn. In the Indiana legislature for 1833 the senator from Switzerland county [John Dumont] had introduced a bill to reorganize Indiana University [he means College] into a manual labor institution. It made provision for purchasing a large farm, erecting expensive buildings, purchasing all kinds of agricultural implements and machinery, stocking it with all kinds of stock, making it obligatory on the students to work certain hours each day on the farm and all day Saturday, and appointing as superintendent at a high salary the laziest man in Monroe county.

This was the time of mud roads and corduroy turnpikes, and communication with Indianapolis was like angels' visits, and the bill had passed its first two readings before we heard of it. Our Board of Trustees were scattered all over the

state and the faculty were left to their own resources. Professor Elliott was instructed to go to Indianapolis at his own expense and work to get the bill defeated. He adopted the tactics of "a still hunt"—approached the senators one by one, showed them that the provisions of the bill would absorb all their funds, drive off all the students, and close the doors of the College. He received their pledges to vote against it, until he secured three-fourths of the Senate before the bill was ordered to its third reading. The Senate had been very polite to Professor Elliott and had given him a seat in their chamber opposite to Senator Dumont's. It had been agreed to let Dumont make his speech, and then without reply to take the vote. As no reply was made, Dumont was confident that it would carry unanimously. When the Senators began to vote "No!" "No!" "No!" he looked around the chamber with alarm and astonishment, until his eye fell upon Professor Elliott. He crossed the chamber and, seating himself beside him, said: "Ah, Professor! you are a pretty long-headed fellow. I see what you have been doing. You have beaten us this time, but I hope to see the day when there will be a professor of agriculture in every college in our country."

But we need read no further from the manuscript of this charming old octogenarian. Whether the defeat of the Dumont measure was altogether due to the "fine Italian hand" of the mathematics professor, I think may be doubted; but that the absurd measure was defeated, and that Professor Elliott aided materially in the defeat, and all at his own expense, there cannot be a doubt. Had the bill passed, the end no doubt would have been the wrecking of Indiana College.

Let us now pass on to the collegiate and legislative year of 1837-38. In this year the corporate life of the Indiana College ends and that of the Indiana University begins. The five years intervening between 1833 and 1838 abound in matter interesting enough to the historical prowler, but no event of them all affords so good an ending place for these Foundation Day papers as the change from College to University.

During the intervening years the president of the College was brought to trial before the board on what appears at this distance to have been a trumped-up charge of an abuse of trust in the matter of buying books for the library, but he was triumphantly acquitted. Following that, was an effort to bring the matter before the General Assembly of the state, but that proved a failure also.

Notwithstanding the occurrence of many things to harass and annoy, the institution gathered strength and the attendance of students increased. Professors during these intervening years resigned and went to other fields of labor, and thus it began to be made plain to the people that the College was a thing separate and apart from the men who happened to fill its chairs. To begin the discernment of this was a point gained, but it was many, many years before the

lesson was fully learned. During these years one reads between the lines that the people of the state were beginning to be impressed with the idea that the College was in some way necessary to the welfare of the state. I do not know whether it would have been possible to carry thru the legislature a measure appropriating money to the institution or not, but I hardly think it would. And this for the one reason, if for none other, that the general opinion was that the institution, if not abundantly, was at least sufficiently endowed. It was only a few years before this time, as we have seen on a former occasion, that a legislative committee had in a report shown that the endowment of the institution could be made to amount up to \$100,000 in a very few years; and the committee expressed the opinion, in the utmost confidence of its correctness, that a hundred-thousand-dollar endowment would be ample for all the purposes of a university such as was contemplated by the provisions in the constitution of 1816.

Well, the funds available as a source of income amounted to between sixty and seventy thousand dollars, and there was remaining and unsold something over ten thousand acres of land, which when sold would, it was reasonably hoped, bring the endowment up to the hundred-thousand-dollar mark. What more could any college want? An appropriation would have been impossible. No member of the General Assembly ever proposed it by bill or otherwise, so far as I can learn. Yet there were men in the state who saw clearly enough the necessity for it. Governor Ray, as we have heretofore seen, recommended it; and Governor Noble, in his annual message to the General Assembly in 1837-38, renewed the recommendation.

And how much better it would have been had the recommendations been heeded! What was needed at that time above all things was for the people of Indiana to know that the Indiana College was not an institution the administration of whose affairs it was the duty and privilege of the state thru its legislature merely to overhaul annually and approve or condemn, but that it was a ward of the state—an institution of the state which had to be supported by the state. Had that lesson been learned fifty years ago, how different the condition of the institution would be from what it is! And that lesson would have been learned, I have no doubt, had Indiana College been less efficient than it then was.

It has already been stated that after the faculty fight of 1832, the politicians ceased measurably their attacks upon the College and its management.

But in their place came an army of ecclesiastics, backed up by a great church organization, and the war went on against the Indiana College. There is not time now to give any account of that controversy. I can only say that the battle was fought out with a ferocious courage that was common to the men of that day, and that the Indiana College came out of the contest with great loss. Students fell off and professors resigned, and something had to be done.

In December, 1837, Governor Noble, in his annual message, after paying a high tribute of praise to the thoroughness and effectiveness of the academic work which the College had already done, declared "this to be a propitious time for carrying into effect the constitution of Indiana with regard to the establishing of a State University", and concluded by recommending that the College have bestowed on it that distinction together with the necessary endowment.

This was at the commencement of the session in December. Bills were presented in both branches of the Assembly and on February 13, 1838, the Senate bill was concurred in by the House. By a vote of the General Assembly of the state, the Indiana College was thus transformed into the Indiana University.

VI. PERILS FROM SECTARIAN CONTROVERSIES AND THE CONSTITUTIONAL CONVENTION (1838-50)¹

MR. ROOSEVELT in his charming history, *The Winning of the West*, tells us of two Kentucky hunters of the early day who lived alone in the wilderness, far from any settlement. They held to opposing religious creeds, and in spite of their common danger they argued, quarreled, and separated. The one kept the old camp, while the other took up his abode in a hollow tree, but within shouting distance. Every day on arising they cried "Good morning!" but not another word would they speak to each other the whole day long. And this habit, the author tells us, they kept up for many months during which they saw no other faces.

To us who live in this liberal year of grace, Mr. Roosevelt's story seems incredible. And so I suppose the story of the assaults made from time to time upon this institution—as Seminary, College, and University—by religionists, or rather in the name of religion, seems likewise incredible to many.

On past Foundation Day occasions attempts have been made to tell the story in sufficient detail to give you a fair idea of the trials thru which the institution passed from that May Day in 1824, when

¹Delivered in the Old College Chapel, as the annual Foundation Day address, January 19, 1894.

it received its first instalment of students on down till after the Seminary became a college. The story is not a pleasant one to tell. The story-teller is liable to be misunderstood. There has been such a great and radical change in the thought and sentiment of the people of all sects, and of no sects, within the past fifty years, that we of the present are apt to misunderstand the story when told.

It was said (was it not?) at the last Foundation Day exercises that you were hearing the last of the sectarian controversies that were waged about our school. Further investigation, nevertheless, reveals the fact that the true condition of the institution for many years cannot be understood without a further reference to church interference with its affairs.

In the beginning, and for many years thereafter, the professors in the school either belonged to or sympathized with the Presbyterian faith. Today nobody seems to care to what church a professor belongs, or whether he belongs to any; what his religious belief is, or whether he has any. If he demeans himself aright and can teach successfully, people for the most part are satisfied. But in the early days of our College history, the fact that the professors were of one faith was to most people of other faiths conclusive evidence of the fact that sectarianism was taught in the College.

That sectarian tenets ever *were* taught in Seminary, College, or University, the evidence, in so far as I can discover, utterly fails to prove. On the contrary, all the evidence that I have thus far found proves there was no such teaching. But that doesn't matter now. Some people of the long ago said there *was* such teaching, and many people believed them and the College suffered.

Right here the College management, it seems to me, was at fault. Everything should have been done that rightly could have been done to take the sting out of the charge. The board ought to have mixed the religion of the faculty, if that was possible. The peculiar temper of the times made that a politic and a proper thing to do. The exigencies of the institution made it a proper thing to do. But the board did nothing, and so the charge was kept up.

In 1832 the Indiana Methodist Conference was established, and the first Conference meeting was held in New Albany. At that session a committee was appointed "to consider and report on the propriety of establishing a college, or conference seminary". The committee reported that it was "*very desirable* to have an institution under our own control, from which *we can exclude all doctrines* which we deem dangerous, though at the same time, we do not wish

to make it so sectarian as to exclude or in the smallest degree repel the sons of our fellow-citizens from the same”.

But it was decided not to attempt the founding of a school yet awhile. “It was thought”, says Dr. Holliday in his life of the Rev. Allen Wiley,—“it was thought if we could receive something like an *equitable share of privileges* in the State University at Bloomington, it would answer the wants of our people for several years.”

This then was the beginning of the last and of the most formidable assault made upon the institution in the name of religion. Up till this time a fusillade had at intervals been kept up all along the line by all the sectarian warriors, on the grounds that the institution was to all intents and purposes a Presbyterian institution. Now the Methodist church steps in, reiterating the old charge and demanding “an equitable share of privileges in the institution”—whatever that meant.

In 1834 the Conference memorialized the General Assembly of the state on the subject. In this memorial the charge was made, that “one common hue, one common religious creed, characterizes every member” of the faculty, and that the youth of all the churches save the Presbyterian find the religion of their fathers only “tolerated” not “domiciled” in the institution.

The direct relief asked for by the memorialists was that the election of the members of the Board of Trustees be taken out of the hands of the board itself, and be restored to the legislature—a proposition which, if considered apart from the *motive* of the memorialists, certainly seems a very proper one. For as the law then stood, giving the board the power of filling vacancies, it created what is commonly called a close corporation.

But right here I deem it proper to say that, so far as I have been able to discover, the board was never charged with having abused their privilege. The truth is the Board of Trustees seem to have always been careful to have all sects, parties, and interests fairly represented. No sect ever complained of want of representation *on the board*; but of want of representation *in the school*.

We need not stop to inquire particularly what was meant by the equitable share in the privileges of the institution that would have satisfied the Methodist want of half a century ago. From the language of the memorial, it may seem that as Presbyterianism was domiciled in the school the “equitable share of privileges” would have followed the domiciling of Methodism also. Dr. Wylie, in his book, *Sectarianism is Heresy*, tells us that Mr. Mayfield, a Methodist member of the Board of Trustees, proposed to him that a chair

in the College be established to be called the "Wesleyan chair"—which warrants the inference that Mr. Mayfield, at least, had in view the inculcation of sectarian tenets; and if we concede what was claimed by the Methodists, that the Presbyterian professors were teaching Calvinism, it would certainly follow that Methodist professors might with equal right teach Arminianism.

Dr. Cyrus Nutt, who was for so long a time [1861-75] president of this University, and who, as a Methodist minister and educator of long and honorable standing, may therefore be appealed to as an authority, says in an article contributed by him to Goodrich and Tuttle's *History of Indiana* that the Methodist church

tendered the support and patronage of the denomination to Indiana College, *provided* the General Assembly would so modify the organization thereof as to make the trustees elective by the legislature; or, if the trustees would *place a Methodist* in the faculty. These requests were steadily denied until 1836, after the Conference had selected Greencastle as the location for the University for which the legislature had just granted a charter. Then the authorities of the State College elected Augustus W. Rutter, a Methodist . . . to the chair of political economy and modern languages. But this liberality came too late, for the denomination had a college of its own.

Dr. Holliday, in his life of the Rev. Allen Wiley, says that a professorship was offered to *him*—but when he does not say, and the College records of the period are destroyed.

The consequences resulting from this effort of the Conference to secure their "equitable privileges" in the State College were far-reaching. We are told in the *History of Methodism* that, on the presentation of the memorial to the legislature, "a storm of indignation was raised among those who controlled the State University". They charged that it was an effort made on the part of the church to capture the institution and to reorganize it for church purposes.

Of course the Methodists indignantly denied this, and an angry debate followed. "It was tauntingly said in the halls of the legislature", it is recorded in the *Indiana Methodism*—"that there was not a Methodist in America with sufficient learning to fill a professor's chair if it were tendered him." The speaker of these obnoxious words was Samuel Bigger, a Presbyterian from Rushville. In 1840 Samuel Bigger was elected governor of the state on the Harrison ticket. No power short of the direct interposition of God could, we may assume, have defeated him that year. Three years afterward he was a candidate for reelection, but there was no log-cabin and hard cider to rally around this time. The Governor's ill-advised speech of eight years before, ghostlike, confronted him. The time

for revenge had come, and the bishops and elders passed the word down the line that the offender must be beaten, and he was beaten. Subsequently Bishop Ames said, in the hearing of Mr. W. W. Woollen, as stated in his *Biographical and Historical Sketches of Early Indiana*, that "it was the Amen corner of the Methodist church that defeated Governor Bigger, and I had a hand in the work."

But what of the College amidst this battle of the sects? Dr. Nutt says that, because of the illiberality of those in control of it, "the legislature withheld all financial support for thirty years, and the State University made no progress".

It is certainly true that comparatively little progress was made by the institution for thirty years, and for many more than thirty years; but it is too much to say that it was all due to the cause assigned. Many causes existed, each of which had something to do with retarding its growth; but the chief one was sectarianism in some form or other. Our poor weak institution was the football that was kicked back and forth whenever the mighty Methodist and puissant Presbyterian athletes saw fit to have a game. True, other sects, as heretofore has been shown, kicked on occasion. After Dr. Wylie's death, which occurred in 1851, a Presbyterian president, Dr. Ryors, was chosen to succeed him. But at the end of his first year the Methodists made a touchdown, and Dr. Daily went in; and thence on for more than twenty years they held the banner. As a matter of fact, there never was any real, any substantial, any notable growth of the University until there was an absolute cutting loose from all sectarian or church influences as such. Not that there ever was any sectarian teaching in the school, for there was none—none any more than there is today. But the "outs" always insisted that there was. The "outs" always insisted that the institution was a tail to somebody's church kite, and the effect was paralyzing.

The contest for sectarian control continued, first and last, for more than fifty years, and it was a contest that had to be. The age was a pugnacious one. The true relation of the College to the state was generally misunderstood. To most men it was inconceivable how a college that was not under some sort of church supervision could exist and not be infidel. Out of this belief came a call of the faithful to arms. How natural the question, "If some church, why not *my* church?" And so it became a conflict over, and not with, the institution.

From the battlefields of the past come the blessings of the present. But for Runnymede there might have been no Magna Carta. Asbury, now DePauw University, was born of the contest

I have thus briefly attempted to set forth; and after many, many years our own University, relieved from the shackles of ecclesiastical contention, leaped at a bound to her present position of usefulness and of high honor.

As has been stated on a former occasion, the Indiana College was legislated into the Indiana University in 1838. The annual income of the institution at that time from all sources was less than \$5,000, and this was thought by most persons of the state to be an adequate income for the support of either a college or university.

The question naturally arises, "Why was the change in name from College to University made? Why was a University charter granted to supersede the College charter?"

In those days men not infrequently petitioned the legislature for a change of name because of some odium attaching to it, and it may have been that a like reason was thought to exist in this case. The life of the Indiana College had certainly been a most stormy one. Beginning with the great faculty fight of ten years before, the institution had been in a continuous state of turmoil ever after. Indeed the warfare was still going on, and the legislature may have thought that a change of name would be followed by an era of peace and prosperity.

But another and better reason may be suggested.

The Indiana College was a typical American college. It had its fixed curriculum of studies, which required four years for the student to complete in order that he might receive its one earned degree. These studies were divided into four groups—the classics, mathematics, the sciences, and the humanities. Each student was required, or at least expected to give the same attention to each of the studies embraced in each of the groups. There was only one College bed, and every sleeper, whether long or short, had to conform to it.

This division was common to all the American colleges of a half-century ago; indeed, it is still the plan of most colleges. It does not mean an identity in subjects taught in the colleges of today, nor did it mean such in the colleges of fifty years ago. The colleges always differed, for instance, as to which of two classic authors should be read, and as to whether this or that study in the humanities should be pursued, and the like; but as to the general classification here given they were all of one mind. A school whose curriculum recognized this classification and presented in something like equal proportion subjects appropriate to each group, to complete which would ordinarily require four years of study, was (and still is) a college of arts and sciences; and such was the Indiana College.

Now, to such a college add one or more professional schools, and according to the prevalent idea of fifty or sixty years ago there would result a university. The added school might relate to engineering, pedagogy, agriculture, theology, medicine, law—one, some, or all of these. The idea seems to have been one of addition to, rather than of incorporation with, the College. The College was to remain a college. The Procrustean bed was to remain. The candidate for the A.B. degree was to have his yearly stint of classical, mathematical, scientific, and humane learning as of yore. The name "university" was simply descriptive of a college of arts and sciences upon which had been grafted one, two, three, or more schools relating directly to certain of the activities of life.

This, I think, was the old American idea of what was required to constitute a university. It marks the first step in the development of the American university out of the American college.

This is certainly the idea that the General Assembly had when they passed the University charter act; for they expressly declared that schools of medicine and law should be established. And it was certainly the understanding of those having in charge the conduct and management of the institution for more than forty years thereafter.

No effort was ever made, so far as is now known, to add a school of medicine until 1872, when an arrangement was made with an Indianapolis medical school whereby it became a part of the University. But the arrangement soon fell thru with, and nothing of the kind has ever [till 1903] been repeated.

In a very short time after the granting of the University charter the board began to cast about for a law professor, but it was not till 1842 that one was found. In that year David McDonald, who was the judge of the tenth judicial circuit—which circuit was composed of ten counties, of which Monroe was one—moved from the town of Washington in Daviess county to Bloomington. On June 7 he was elected to the office of professor of law, and on December 7 following he read the first law lecture that was ever read in this institution.

The law year in the beginning was limited to three months. It was the purpose of the founders of the school that the law terms and law year should coincide with the collegiate terms and year, but it was a long time before that purpose was carried out. In 1848 a half-month was added, and some time in the sixties another half-month was added, and subsequently another half-month—making a four months' term; and early in the seventies the original purpose of the founders was carried out.

The change from College to University (in name) was not followed by that revival of its fortunes that the friends of the institution no doubt hoped for. The war that for so long a time had been waged against the institution, first by one foe and then by another, went on with scarcely a break in the ranks. New enemies were ever present to take up the fight when the old ones left off.

At the very next session of the legislature, three Bloomington citizens, two of whom were members of the Board of Trustees, knocked at the doors of legislation with a memorial containing sundry charges of evil-doing against the president.

The legislature declined to act, as it had so often done before, but referred the matter back to the board. On the second of April, 1839, this body was convened—David Wallace, the governor of the state, and by virtue of his office its vice-president, being present.

Dr. William C. Foster, a citizen of the town, appeared and filed a long string of charges—which, after the lapse of nearly fifty years, and after the deaths of accuser and accused and triers, look as if they owed more to the malevolence of the accuser than to the evil-doing of the accused. Duplicity of conduct, mistreatment of professors, refusal to read from the rostrum the by-laws of the institution, inadequate punishment of two wicked students, were some of the charges.

It was not the first time that the medical doctor appeared as the public prosecutor of the divinity doctor. During College days he had caused the president to plead at the trustees' bar to a charge of malfeasance in the purchase of books for the College library; but the decision was against him. For five days the board now sat as a court, and heard the evidence from more than twenty witnesses who were examined and cross-examined by the two doctors.

At the close the decision was rendered. The president was acquitted on all the charges—"triumphantly vindicated", wrote the governor of the state in his next annual message to the legislature. This was not, as already stated, the first public trial before the Board of Trustees that President Wylie was subjected to, nor for that matter the last. Four times during his administration of twenty-two years he was required to plead to charges preferred against him, and as many times was he "triumphantly vindicated". From first to last he was, in more senses than one, a much tried man.

A College cyclone followed at the close of the trial of which I have just given some account. The reader of the contemporaneous record cannot help drawing the inference, from sundry hints and innuendoes, that it was not a state of perfect peace and harmony in

the faculty at that time. If there was a lion and a lamb in that faculty—or, for that matter, a lion and two or three lambs—they were certainly not lying down together. But be this as it may, three professors out of five were beheaded by one resolution, and the catalog showed the teaching force to be a president, one professor (our present Dr. T. A. Wylie), and Matthew M. Campbell, of the preparatory department.

The number of students that year dropped to 89—52 in the four College classes and 27 in the preparatory. The next year the total number dropped as low as 64—the lowest ever reached—41 of whom were in the four College classes, and 23 under Professor Campbell.

After this lowest point of depression, growth came—slow to be sure, but steady growth. The faculty chairs were filled, the Law School was added, and (by 1846) 198 names of students appear in the catalog. Thence on till President Wylie's death, which occurred in 1851, the number never fell below 163.

The want of time forbids that we follow the story of the misfortunes that happened to the institution during the years that intervened between 1840 and 1850; and I am glad that the want of time does forbid it, for the story is not a pleasant one to dwell upon.

It will not startle you, I know, if I tell you that the public grew weary of the contentions over the University at Bloomington. Long enough had it been made by friend and foe a disturbing element in state politics. Long enough had it been a bone of contention for combative ecclesiastics to fight over. Long enough had it been the victim around which the Bloomington factions gathered and fought and brought scandal to the state. And so the question began to be bruited in the legislature, Whether the cause of education in Indiana, and especially the best interests of the University, would not be promoted by a removal of it to a more peaceful and appreciative locality.

The state was in this temper when the constitutional convention of 1850 met. Most of us know the great prominence given to the University in the constitution of 1816. "It shall be the duty of the General Assembly, as soon as circumstances will permit, to provide by law for a general system of education, ascending in a regular gradation from township schools to a state university, wherein tuition shall be gratis, and equally open to all."

There is no mention made of the University in the constitution of 1850. Why? The question is not hard to answer. In truth it is harder to tell how it happened that it was not made possible, by the

convention that framed the organic act, for the institution to be robbed of its endowment and left to perish off the face of the earth.

The convention of 1850 was the most remarkable lawmaking body that was ever convened in the state. Never before nor since did the people of Indiana so generally disregard the claims of party as they did in the selection of delegates to represent them in that convention. Among its members were found many of the ablest lawyers of the state and the best debaters. Many of the best men of other callings were there, and of the rank and file there were few who were not looked upon as safe men and of most excellent judgment. Robert Dale Owen, a philosophic statesman of a high order of merit was there. Daniel Read, a professor in this University and a man of wide reading and of sound learning, was there. John I. Morrison, of Salem, for some time a professor in this University and an educator of high rank, was there. And so were the two Carrs, and Pettit and Kilgore, and Bright and Rariden, and others that I could mention but of whom many of you most likely have never heard; but they were considered strong men in their day. I could mention some of whom you have heard, Colfax and Hendricks, and Holman, also Hovey, but they were comparatively young men then.

There were men in that convention who aspired to seats in the United States Senate and who reached the goal of their ambition. There were—I do not know how many, who had served in Congress, and more who subsequently served. There were judges, more than I know of, in *esse* and in *posse*. There were two members who were destined to reach the vice-presidential chair. And it does look as if the Indiana University ought to have sailed thru summer seas into the haven of that constitution.

But from the first it was apparent that the University was in hard lines. From the first a disposition to cut it up root and branch was shown that is almost incomprehensible to us of the present.

Two causes, I think, may be assigned for the existence of this spirit toward the institution. Some time ago there was presented from this platform a discussion on the want of educational facilities in our state during the middle ages of its history. I have no intention of repeating on this occasion what was said on that. My only purpose is to remind you of the very low standard of common school education in Indiana at the time of the meeting of that convention, and that the low standard had borne fruit. The illiteracy of the state was appalling. There were over 73,000 persons in Indiana over the age of twenty years, as shown by the census of 1850, who

could neither read nor write. There were 1,000 illiterates out of a population of 11,283 here in Monroe county, and Monroe county was no worse off in this respect than were her neighbors.

The public men of the state were alive to this state of affairs, and had been for years. Law after law had been passed to stem the tide of ignorance, but in vain. The academies (and their name was legion) and the colleges were doing their work fairly well; but it was in the common schools that the failure was. It was the common school children of the state who were the victims of the great wrong.

So prominently did the inadequacy of the common school stand out, and so self-evident was it that the great tide of ignorance would continue to roll over the land until the common schools were recreated, that their wants, their needs, tended to obscure the usefulness to the state of that higher education which the University was ordained to give. And so, many of the constitution makers of 1850 could see no educational want on their horizon but that which centered immediately in the common schools.

Mr. John I. Morrison, chairman of the committee on education, early in the session introduced a series of resolutions in the interest of the University; but these were followed by counter resolutions, gravely proposing to sandbag the University and rob her of her patrimony, by distributing the income to the district schools of the state.

A report from Mr. Morrison's committee to the effect that the University fund came from a donation from the federal government for the purposes of higher education, and that it could not therefore be legally directed to common school purposes, soon put that scheme to rest.

But it was shortly followed by another. Judge Borden, a delegate from Allen county, was instructed, he declared, to do something adverse to the institution. He was an educated gentleman and an immigrant from the state of New York. I think it likely that he was acquainted with the New York plan, for he now proposed to distribute the income from the University fund among all the colleges of the state, in proportion to the attendance of students. And a battle was fought in the convention over that ridiculous proposition. Many speeches were made, and the debate took a wide range. The defense was mainly made over the sacredness of the trust. Time forbids that I should follow that debate. Doubtless to the friends of the institution there seemed at the time grave cause for apprehending the worst. But there were too many men in that convention who clearly foresaw the odium that would justly be encountered by

the state for any such act of bad faith as that; and so, when the Hon. John Pettit, a member from Tippecanoe county, presented a resolution in these words, "All trust funds held by the state shall remain inviolate and be faithfully and exclusively applied to the purposes for which the trust was created", the friends of the institution rallied to its support and passed it, and made it a part of the constitution of the state.

If the University be not mentioned by name in this constitution, the wise and timely section just read was made a part of it for the express purpose of forever placing its endowment beyond the reach of legislative dispersion. At the very time that this constitutional inhibition was passed, there was an act pending in the legislature of the state to distribute the University funds among the common schools of the state. Whether that act would have become a law or not, we do not know. But I think this much may safely be said—that but for the constitutional provision just read, there would have come a time when no fund, University or common school, would have been deemed so sacred as to escape the touch of unholy legislative hands.

Our present state constitution is characterized by many wise and statesmanlike provisions. One of the greatest of these is the one which provides that all trust funds shall forever remain inviolate, and be faithfully and exclusively applied to the purpose for which the trust was created.

PART II

[Except where otherwise indicated, the following addresses were delivered at the Centennial Educational Conference, held by Indiana University, May 5-7, 1920. With the exception of the second address by Dr. Warthin, they are arranged in the order of their places on the program.]

THE AMERICAN UNIVERSITY: TODAY AND TOMORROW

Jacob Gould Schurman was born at Freetown, Prince Edward Island, Dominion of Canada, May 22, 1854, the descendant of a New York Dutch family. In 1875 he won on examination the Gilchrist scholarship, open to all Canadians under twenty-one years of age, and on this scholarship he studied for three years in England, Scotland, and France, receiving from the University of London the A.B. degree with first place in Honors Philosophy in 1877, and the A.M. in 1878. He studied in Paris and at the University of Edinburgh in 1877-78, receiving from the latter the Sc.D. degree in Mental and Moral Science. In June, 1878, he was awarded one of the two Hibbert Traveling Fellowships, which were open to graduates of all British universities, and for which there were over sixty competitors from Oxford, Cambridge, Dublin, London, etc. On this fellowship during the next two years he studied at the Universities of Heidelberg, Berlin, Goettingen, and in Italy. The following institutions have conferred the LL.D. degree on him: Columbia University, 1892; Yale, 1901; Edinburgh, 1902; Williams, 1908; Dartmouth, 1909; Harvard, 1909; Brown, 1914; University of Pennsylvania, 1917; Dalhousie, 1919; Rutgers, 1920. In 1919 he was appointed a Chevalier of the Legion of Honor. He began his teaching career at Acadia College and Dalhousie College, in 1880, as professor of philosophy. From 1886 to 1892 he was Sage professor of philosophy in Cornell University, and president from 1892 to 1920. He was president of the first United States Philippine Commission and spent most of 1899 in the Philippine Islands. He served as minister to Greece and Montenegro in 1912-13, and as Stafford Little lecturer at Princeton in 1914. In 1915 he was the first vice-president of the New York state constitutional convention, and a member of the New York state food commission in 1917-18. His published works include: *Kantian Ethics and the Ethics of Evolution*, *The Ethical Import of Darwinism*, *Belief in God, Agnosticism and Religion*, *A Generation of Cornell*, *Report (to Congress) of the Philippine Commission* (joint author), *Philippine Affairs—A Retrospect and Outlook*, *The Balkan Wars*, *Why America is in the War*.

THE AMERICAN UNIVERSITY: TODAY AND TOMORROW¹

By JACOB GOULD SCHURMAN

EDUCATION is a development of human faculties and powers. It has reference, therefore, to a goal, an end, a purpose, a final cause. Whither would we go, at what would we aim, in and by our educational processes and methods? I know not how we can ever answer that inquiry without facing the still more formidable and fundamental question: What is the chief end of man?

THE ENDS OF LIFE: RELIGIOUS

But the answer which the Christian catechism gives to this latter problem, however true, is not specific enough for our present purpose. We believe, indeed, in our best moments that human life is charged with some divine mission, that we are fellow-workers with God even in this life, and that we shall not be separated from Him in the life beyond the grave. The conviction is inextinguishable in the human heart that our being's life and home is with infinitude and only there. But this general conception and this fundamental faith, while investing the life of man with ineffable dignity and inexhaustible significance, do not reveal to us the ends at which we should aim generally or the elements that enter into the *summum bonum* of human existence. It is no disparagement of Christianity to say that it is a religion and not a theory of education or a philosophy of life. What it contributes to every system of thought is the declaration of the supremacy of righteousness over any other end which men may pursue. Seek *first* the Kingdom of God and His righteousness. Or, in the more legalistic language of the Old Testament but with the same substance of doctrine: Fear God and keep His commandments, for this is the whole duty of man.

A self-surrender and obedience to the divine will: these are the supreme demands made upon the heart and mind and conscience of the children of men. But while the highest, they cannot be the only objects of life. They are the end of our spiritual and moral nature. But we are also endowed with rational natures which de-

¹Foundation Day Address, January 20, 1920.

light to think and reason and know. And we have an animal organism for which there must be provided food, clothing, shelter and other objects for the gratification generally of our instincts and impulses—an organism which has led to the creation of that vast economic system which revolves round the poles of capital and labor.

THE ENDS OF LIFE: RATIONAL

If the Jews have been the moral and religious guides of Europe and America, the Greeks have been their intellectual teachers. And as the Jews emphasized the supremacy of the moral and spiritual, the Greeks exalted and crowned the rational and ideal. Aristotle, the greatest thinker of their race, and still the "master", as Dante called him, "of those who know", declared that the end of human existence, the *summum bonum*, was to be found in the activity of the rational powers of man.

We accept the result of Aristotle's masterly analysis of the ends of life. We recognize that the exercise of the powers of reason and reflection is a higher and nobler pursuit than wealth, pleasure, fame, or any of the other objects that he discusses. It is not Aristotle's fault that he lived three hundred years before the Christian conception of life was revealed to the world. How he would have regarded it we can only conjecture. It is not improbable that with the predominant intellectualism of his race—an intellectualism that led Socrates to declare that men could not know the right without choosing it—he would have rejected the transcendental claims of goodness and righteousness and self-sacrifice, even if he had not felt, like the later Greeks, that the cross was a symbol of "foolishness". But we, the heirs of all the Christian ages, should in this matter be wiser than even the greatest of the pre-Christian sages. And while we accept Aristotle's doctrine of the dignity and excellence of the rational nature of man, we hold with Bishop Butler "that conscience, if it had might as it has right, would absolutely govern the world".

There is a similar one-sidedness in Aristotle's conception of our appetitive and impulsive nature. And the system of slavery practiced even by the Greeks made it still easier for him to look down upon the toilers by whom the imperious needs of that nature were satisfied. There was for Aristotle in all manual labor, as Professor Butcher has pointed out, something not only menial but ignoble. He was in this respect also the child of his age. The Greek ideal left out of account the disinherited, the fallen, the weak and op-

pressed. The aristocratic sentiment, which was very strong in the ancient democracies, colors all Aristotle's thinking. Not only slaves but artisans, laborers, and shopkeepers were excluded by him from the body of citizens. Aiming to develop the highest and most complete life for man he fixes his attention only upon the favored few, the gifted, the strong, the noble. In his ideal Greek gentleman you find, not only a certain exclusiveness of mind, but also a certain tone of contempt for what is commonplace. Perhaps if Aristotle could have looked ahead two and twenty centuries and seen mechanical industries rationalized by science he would have abandoned his attitude of haughty contempt and regarded with more sympathetic and kindly eyes not only manual labor but also the human toilers who perform it and made it the duty of his state to develop in them also the highest and richest type of life of which they are capable. As it was, Aristotle's conception of the *summum bonum*, his ideal of the highest or perfect life, could be realized only in those who devoted themselves to statesmanship, to knowledge and speculation, and to certain forms of art.

THE ENDS OF LIFE: MATERIAL AND ECONOMIC

The modern world corrects Aristotle's narrow exclusiveness. We recognize that rational objects are higher than material. But as long as man has a body he must include among the ends of life not only the things of the spirit and the things of the mind but also the economic goods that enable him to live and work and provide himself with a suitable measure of physical comfort and enjoyment.

All this brings us back to the popular conception of man as a being made up of spirit, mind, and body. Christianity, like Judaism and every other great religion, proclaims the supremacy of the spiritual interests among all the ends of human existence. On the other hand, philosophy, which is an effort to think out the ground and significance of the universe, has, not unnaturally, tended to glorify the rational nature of man as his highest endowment and to find in it the key to the interpretation of the world. This tendency was most marked in Aristotle, the greatest of philosophers. It was, indeed, implicit in the best thought of his race, which pictured man as a synopsis or exemplar of the universe—a microcosm facing that macrocosm—and conceived of Logos or Reason as the common ground of both. And from ancient Greece this sublime Rationalism has spread thruout the entire civilized world. But in modern times the spread of democracy and the application of science to

industry and the development of a vast system of mechanical production and transportation have tended to focus attention upon the material interests of mankind, to enhance their value in the scale of human ends, to invest manual laborers with a new importance and dignity, and to stimulate on their behalf radical and even revolutionary doctrines of the rights of man and of the functions and duties of the state which perplex timid thinkers and alarm the stolid supporters of existing institutions.

THE ECONOMIC READJUSTMENT

But the world is not headed for anarchy in its politics or materialism in its philosophy or scepticism in its religion. Not anarchy, because man is a moral and political animal and must live in a society based on justice. Not materialism, because while man *has* a physical organism he *is* in his inmost essence mind and spirit. Not scepticism, because the divine spark in man cannot permanently estrange itself from the all-embracing divinity in whom we live and move and have our being.

What we are witnessing in this age is another phase of the ever-recurrent process of adjustment to new conditions. History reveals to us epochs of faith and epochs of doubt, periods of liberty and periods of oppression, centuries of science and centuries of superstition. Great thinkers arise and dominate men's modes of thought. There was a Ptolemaic age and a Copernican age, a system of Locke and a system of Hegel, a theory of Darwin and a theory of Karl Marx. While Darwin was in the ascendant men thought in terms of evolutionary biology; Marx's theory of economic materialism and the class struggle is today an infallible gospel for the half-educated and ignorant men and women who try to philosophize on the problems of labor and capital.

In all this there is no real ground for alarm or even anxiety. The phenomenon is not unfamiliar to the historian. What is happening is that a class hitherto inadequately recognized is asserting its power and its rights. That class calls itself "labor"—a linguistic monopoly of service far more pardonable than the maiming of personality implied in the employer's designation of "hands". And if in asserting its own rights and magnifying its own services this class often disregards the rights and services of other classes and shows scant concern for the rational and spiritual ends of life or for any other object than wages and manual labor, this is only a narrowness and one-sidedness born of the ardor of strife for a new cause.

Man must, it is true, have economic goods if he is to live. And the producers of those goods must receive in the future a larger measure of social and industrial justice than they have enjoyed in the past. No result of the Great War seems to me more certainly assured than this. But when it is realized—and you, young men and women, are likely to witness it—it will still remain true that man lives not by bread alone, that moral and political and intellectual and spiritual ends are all higher than material ends, and that in the state we are all members one of another, and that no class can be permitted to exploit others, whether the exploiter be educated or ignorant, capitalist or wage-earner, politician or private citizen. Absolute justice is the supreme law of the state; equal opportunity is the first condition of industrial democracy; reason and righteousness is the highest end of the life of man.

THE UNIVERSITY AND MATERIAL PROSPERITY

The university is pre-eminently the organ of reason and knowledge. I shall have more to say on that subject later. At present I desire to call attention to the services which our universities have rendered to the industrial world. From the beginning of universities with the foundation of Bologna and Paris in the twelfth century to the present time European universities have kept themselves unsoiled by contact with manual labor and machinery. They have been schools of the liberal arts and sciences and of law, medicine, and theology, and also latterly institutes of research. But in the United States we have grafted on to the parent stem schools of technology and agriculture, so that workers in the factories and mines and on the farms might be assisted by the light of science which for centuries had illuminated the practice of the lawyer, the physician, and the preacher. The university has thus symbolized, and at the same time ministered to, the democracy of knowledge and the democracy of social groups. And in this process it has kept in the closest touch with the rising tide of "labor". Perhaps that very fact gives university men peculiar qualifications for understanding and appreciating the new demands and ideals of "labor".

It is impossible to exaggerate the value of the service which our universities in the last three or four decades have rendered to the industries of the country and in the last two decades to its agriculture. The public have taken all this for granted. To realize the character and magnitude of this service let us for a moment imagine that our schools of applied science had never come into

existence. What then would have been the condition of our industries? Obviously they would have been paralyzed in their higher functions. For the aim of modern manufacturing, or of farming, is to wrest from nature her resources and by means of nature's powers make them available for use by man. But we command nature only by obeying her laws. Of those laws science is the revelation. In the absence, therefore, of schools of applied sciences, our manufacturers and farmers, and transporters, too, would have been as men wandering in utter darkness and attempting to perform tasks for which the best kind of illumination was an absolute necessity.

SCHOOLS OF APPLIED SCIENCE

I recognize the pre-eminent position which American industry has as a matter of fact attained. I recognize the part played in that splendid development by the initiative, skill, and labor of the American workman and the courage, enterprise, and organizing genius of the American capitalist. But the public makes a great mistake in stopping at this stage of the analysis. There is another factor equally important and equally indispensable. That factor is the enlargement of science and the training of young men in its application to the production and transportation of economic goods. This immense contribution to the industries of America is the work of our universities—and practically of our universities alone. If the United States is the richest and most prosperous country in the world the universities have had a large and leading part in the creation of that wealth and prosperity.

No development of the modern university in America has been more successful than the schools of applied science. Wherever they have fallen below their opportunity, it has been due to emphasis on the mechanical arts and crafts to the neglect of the scientific principles on which the whole mechanism of modern industry depends. Nothing has been more clearly established by American experience than the conclusion that if you want to give a young man the best technical education you must steep him in the sciences of mathematics, physics, mechanics, chemistry, and biology which lie at the foundation of all our industrial enterprises. Drawing and manual training and shop-work have their place in the curriculum, but these exercises for the training of hand and eye can never take the place of pure science, which is the indispensable food for the nourishment of the technician's mind.

The technical school furnishes a professional training that ranks it with the older schools of law and medicine, which in this twentieth century have also made great progress in the United States. The most earnest and effective educational work done amongst us in the last quarter of a century has been done in these schools and in the graduate schools of arts and science, which are also in effect professional schools. The explanation is twofold. First, they all appeal to the student's interest in his life work. And, secondly, with the possible exception of engineering, the students in these professional schools are more mature both in years and training than the undergraduates in arts and science.

THE UNIVERSITY AN ORGAN OF THE INTELLECTUAL LIFE

In spite of this seeming paradox, the colleges of liberal arts and pure science are nevertheless the heart and center of the American university. If they fail, success elsewhere cannot atone for the failure. An institution that consisted of a group of even the most excellent professional schools would not, however designated, satisfy our ideal of a university. The most essential element, indeed, would be wanting. The university is an organ for the development and training of mind. In its higher functions it presupposes a delight in ideas, a spontaneous thirst for knowledge and beauty, a disinterested love of truth for its own sake. It provides for free converse of the mind with the objects on which it feeds and by which it is nourished. It takes the whole life of mankind for its province—what man has done and suffered and achieved and created and embodied in language, thought, literature, and institutions. And the mind of the individual grows and expands by feeding on the products which the great intelligences of the race have created. His sympathies are broadened, his emotions are stirred, his imagination is kindled, his conscience is quickened and purified, his understanding is illuminated and deepened, his power of expression is multiplied, and the once passive intelligence of the man develops into an independent, active, and self-creative reason.

Nor is this all. For if the proper study of mankind is man, it can never be his exclusive study so long as he finds himself confronted by an objective world of infinite vastness and power by which his life is so profoundly influenced and so largely controlled. That intellectual curiosity which leads him to explore the life and creations of the human race challenges the mystery of Nature and

compels her to give up her secrets. The results in generalized and systematic form are what we call science. The laws of nature are crystallized reason. And the active reason of man can therefore read at least a little in nature's book of infinite secrecy. Is it surprising that this contact of human intelligence with divine intelligence latent in the universe should react on the inquirer and educate him? And is it not obvious that such education would be defeated if the inquirer were actuated by any other motive than the pure and disinterested love of truth? If his object is practical utility and love of gain, Nature will not open her mysteries to him. Nor could he be rationally educated if she did.

DEFECTS OF OUR INTELLECTUAL TRAINING

If the development of the rational powers of man is, after goodness and justice, the supreme end of life, we must hold that that part of the university which is peculiarly dedicated to that function is of incomparable importance for mankind. Yet our colleges of liberal arts and sciences, whether in the undergraduate and graduate departments of the universities or separate institutions, do not hold a place in public estimation at all commensurate with their high mission. Nay, we must go further and confess that, whatever the explanation, the results achieved by these colleges fall far below the plane of the lofty ideals to which they are devoted. There is no other feature in the whole university system of our country which is so disquieting, so alarming even, to thoughtful educators. Here are institutions devoted to the evoking of the highest powers of human intelligence. And I fear that the paucity of the scientists, scholars, thinkers, and poets they have turned out in the last generation is proof that they have not been very successful.

It is easier to explain the failure than to remedy it. As water does not rise higher than its source, the level of thought and culture which students bring to the universities is that of their homes and schools. The general intelligence of the American people is higher than that of Europe, but the "high spots" of Europe, which so largely monopolize the universities, are higher than anything with us. It is a part of our democratic sentiment that everybody should enjoy everything, and in obedience to it hosts of students enter our colleges and universities with no special aptitude for, or call to, the intellectual life. Others are "sent" by loving and ambitious parents perhaps for social purposes and sometimes with no conscious object

higher than that of qualification for admission to the local university club. No doubt the overwhelming majority of parents have a genuine appreciation of the higher education, which is often the more movingly accentuated by the fact that many of them are themselves uneducated. And the normal American boy, if not generally animated by a love of learning or caring even in his best moments for research, nevertheless has a high and loyal regard for all American institutions and takes his college course as a part of the best possible American life. The alumni and alumnae also want their sons and daughters to enjoy the educational privileges which fell to them. And perhaps taxpayers who support state institutions are the more insistent on that account that their sons and daughters shall go to the state university.

These and other considerations tend to fill our universities with students of very different qualifications from those selected for a higher education a generation ago. The country has become rich and prosperous, and no advantage shall be denied to the rising generation which money can purchase. And if masses of people still remain poor, by self-help and thru the aid of scholarships and loans the obstacles which poverty puts in the way of securing the highest education may be largely overcome. The universities, therefore, will, if existing conditions remain unchanged, continue to be thronged with all kinds of students. All divisions of the university will be affected by the character of this student body. But for obvious reasons the menace will be greatest to the division of liberal arts and pure science.

THE WAY OF REFORM

It is especially incumbent, therefore, on our faculties of arts and science to consider this evil and, if possible, to devise a remedy. And their task will not be an easy one since the social and political conditions which in part create the danger are unalterable or can be altered only by the passage of time and the process of education. But it is imperative that relief be obtained if our universities are not to undergo deterioration and ultimate decay. The faculty of arts and science is the natural educational leader among the faculties, and its solution of this grave problem is pretty certain to be adopted by the professional faculties, in so far as the need exists.

I venture one constructive suggestion, which, however, is fundamental. The ideal of the university and the existing reality must be brought closer together—and that not by diluting the ideal

but by improving the reality. As I have already said, the university is an organ for the highest development of the human mind and reason. It is no place for those who are not above everything else interested in the things of the mind, who are not lovers of ideas, who are not curious to know, or resolute to see and think clearly. Those to whom this intellectual life makes little or no appeal may be excellent fellows and well fitted for other activities, but they waste their years at the university and they hurt the institution by dragging down the level of its work. For a university differs from a school by the circumstance that it aims at the *highest* intellectual development, which of course is achieved only by the most strenuous intellectual work.

My ideal of university reform is therefore a more rigorous selection of students, more strenuous and robust intellectual work, the prescription of severe and searching annual examinations which shall test both progress in scholarship and in intellectual development, and the grading of successful candidates in first, second, and third rank with the ruthless elimination of all who fail to reach the required standard. The present term examinations are not only too easy, but they cover too short a period of time, they are also too scrappy; and they treat education too much like a mechanical combination of separate compartments instead of an organic process of stimulated activity and growth. By this or some similar reform we must manage to reserve the universities for those who are qualified by natural endowments, by previous training, and by industry and serious interest to profit by the inestimable privileges of intellectual development which they offer to the picked youth of successive generations.

IS SUCH REFORM PRACTICABLE?

Is this ideal of reform a counsel of perfection? Will the legislatures which appropriate funds for the maintenance of our state universities denounce this test of intellectual fitness as exclusive and aristocratic and insist that their universities remain open to all the graduates of the public schools? Will the privately endowed colleges and universities languish for funds if they restrict themselves to educating only youth endowed with superior mental powers and animated by marked intellectual interests and ambitions who devote themselves to study with all their heart and mind and strength?

Perhaps these questions will be answered in the affirmative.

Perhaps the American public will not support such a *system* of high class universities as I have pictured. But no one can make me believe that the most intelligent opinion of the country does not recognize the necessity of such institutions both for the highest education of our youth and the vitalizing and energizing of American civilization.

There is also one step which the existing colleges and universities might take in the direction of this ideal. They might exclude at the end of the first year, not merely those who fail in the term examination, but all those students who had demonstrated their obvious incapacity or unfitness for the intellectual life. There would remain, not only the superior but also the average and the inferior students. These should be set off in different groups, the first classification being into honor and "pass" students. The "pass" group might again be subdivided, but the experience of foreign universities shows this is scarcely necessary. And for these groups of honor and "pass" students there should be different curricula, different methods of instruction, and, if practicable, different teachers. For the honor men can do more work and work more independently, while the "pass" men will continue to need the assignment of definite lessons, the routine of daily drill, and the constant supervision of studies which in the view of the layman it is the sole business of the teacher to supply. The teaching of the honor men, certainly of the best of the honor men, will be dynamic and inspiring; the teaching of the worst of the "pass" men will be a depressing task.

THE FACULTY MAKES THE UNIVERSITY

This is only a mitigation, it is not a correction, of the worst evil which oppresses our colleges and universities at the present time. One would like, in Hamlet's words, to "reform it altogether". And, since a university is a community, the evil can be eradicated only by changing the character of its membership. Now the members composing a university are teachers and students. And since the professors serve the students, the character of the professors will be determined by the nature of that service. But the American public conceives of the essential function of a professor as the instruction of students, and especially of the throng of "pass" students who nowadays frequent our universities. The professor is above all else to be a drill-master and pedagog! And so long as "pass" men dominate, as they now dominate, the student body of

our universities, this conception of the American professor is likely to persist. And if our faculties are recruited from this type of professor and instructor, the scholar and investigator animated by celestial fire is alienated from the university which is his natural home. If this process of deterioration has not gone farther in America, it is because wise university presidents and their intellectual colleagues in the faculties have resisted the process of natural causation and at least delayed the otherwise inevitable consummation.

The faculty makes the university. A great university is an assemblage of great scholars, scientists, investigators, and writers. It is a place where the lamps of learning are kept burning and aglow, where men are curious to know and tireless in investigating, where intellectual life is restlessly active, where new ideas are sought more than hidden treasure. In such a place, encompassed by such an atmosphere, youth of intellectual interests and ambition are caught up as it were in a flame of fire and transported to the seventh heaven. Education for them is participation in that throbbing intellectual life and activity.

THE MENACE TO THE PROFESSORIATE

In a true university all the members are intellectually alert. American universities are overwhelmed with undergraduates who are intellectually inert. The inevitable tendency is the deterioration of the professoriate.

But that is not the only cause which is affecting unfavorably the quality of our college and university faculties. The public renders lip homage to education, but it pays the men who train the mind less than the men who mind the trains. To the dreadful irksomeness of drilling indifferent and uninterested students is added the terror of destitution for the wife and children every normal young man dreams of and hopes one day to call his own. Thus the poets and thinkers and scholars and scientists whom Providence meant us to have we are driving from their natural homes in the universities and forcing into commercial and mechanical pursuits merely that they may find suitable clothing, food, and shelter.

Sure, he that made us with such large discourse,
Looking before and after, gave us not
That capability and god-like reason
To rust in us unused.

The waste of intellect now going on in America is inconceiv-

able. Somehow we must make our universities the hearth and home of the talent and genius of the country. It is born in all classes, poor and rich alike. Can we not provide better means of discovering it and of attracting it from the shops and factories and farms and country homes where it now lacks opportunity for service?

At any rate let us hold on to what we get under the present system, and utilize it to the highest potency for quickening the intellectual life of the nation. We are not doing that today. The duty of teaching the throng of mediocre students that come to the universities absorbs the energy of the faculty, and the professor who might become a great writer or investigator is given no time or left with no energy for that higher function. Yet the discovery of one new law or principle in a university laboratory, such as has been made in the past, might do more even for the material welfare of mankind than the activity of all the legislators, statesmen, and financiers who now monopolize the attention of the world. One improvement, even under our present system, is not, I think, impracticable. We might have professorships, with very light teaching duties—for I would prescribe *some* teaching—open to men and women who gave assured promise, or who had demonstrated capacity, of successfully undertaking original research or productive scholarship. On this point I cannot do better than quote from the speech of Professor Bjerknes of the chair of mechanics and mathematical physics in the University of Stockholm in a speech delivered in New York City a few years ago:

I have been impressed with the material equipment of your universities, with your splendid buildings, with the fine instruments you have placed in them, and with the enthusiasm of the men I have found at work there. But I hope you will pardon me, gentlemen, for saying, as I must say, that, when I found you attempting serious investigation with the remnants of energy left after your excessive teaching and administrative work, I could not help thinking you did not appreciate the fact that the finest instruments in those buildings are your brains. I heard one of you counsel his colleagues to care for the astronomical instruments lest these become strained and cease to give true results. Allow me to substitute brain for telescope, and to exhort you to care for your brains. I have been astonished to find that some of you, in addition to much executive work, teach from ten to fifteen and even more hours per week. I myself teach two hours per week, and I can assure you that, if I had been required to do so much of it as you do, you never would have invited me to lecture here in a difficult branch of science. That, gentlemen, is the most important message I can leave with you.

BERLIN UNIVERSITY IN 1879-80

In other European countries also—in England, France, and Italy (to mention only the large Allied Powers)—the same conception of the professor's office and function prevails. His fine talents and high training are not, as with us, used and exhausted in the tasks of the pedagogue and drill-master. No nation had given more intelligent consideration to this subject than Germany. And before the German universities were captured by the government and converted into agencies of domestic and foreign propaganda, no nation had more efficient universities or more illustrious scholars and scientists. I knew them personally before the process of deterioration set in. I enjoyed the honor of acquaintance and social intercourse, and even friendship, with some of their most distinguished members. I recall glorious days and nights at Heidelberg, where I first learned German, and later at Göttingen and Berlin, forty years ago. Consider only the University of Berlin in the winter of 1879-80. In the faculty were Mommsen, Helmholtz, Zeller, Du Bois-Reymond, Paulsen, and others of world-wide reputation. Nearly all these I not only met in the classroom but knew socially, some of them quite intimately in their own homes. It was a great galaxy of scholars, thinkers, and scientific discoverers. But the high functions which they performed for Germany and for the world were rendered possible by immunity from drudgery in university classrooms, by concentration in *seminars* upon the ablest students, by freedom to pursue their own special lines of investigation, and by reducing the small number of weekly hours given to lecturing, or even omitting them altogether, when the claims of research were most pressing. At times Helmholtz was entirely absorbed in his laboratory experiments and new discoveries in physics; Mommsen would be off to Rome to gather new materials for his history; and Zeller and Paulsen, if they were regular in their university duties, combined them with the demands of their own unintermitted research and publication. Nowhere in the world was there a better realization of the ideal of a university as an organ for the maintenance and advancement of the intellectual life of mankind.

If you will pardon the digression I should like also to recall another figure of those far-off days. I attended some of von Treitschke's lectures, in the large auditorium of the university, to mixed audiences of students and officers and civilians. The consolidation of the new German Empire had only just begun—its marked fea-

ture being the process of centralization at Berlin—so that there was then no question of Germany against the rest of the world but merely of Prussia against the other German states and especially those of the south. Von Treitschke was intensely pro-Prussian. His glorification of Prussia was resented by auditors from other German states. But I recall no other criticism which his lectures provoked. Von Treitschke prepared us for the Prussianization of Germany, for the beginnings of centralization were already in evidence. But who could have dreamt that in the short span of thirty-five years the ideas von Treitschke championed would have brought Germany into collision with the world, entailing her downfall as a great European power, and overwhelming her with terrible hardships and with disasters unparalleled?

AMERICAN UNIVERSITIES BEHIND EUROPEAN

From this digression I hasten to return to our American universities. We must instruct the public as to what the university essentially stands for in American life and civilization, we must eradicate from their minds the idea that it is a glorified high school. We must teach them that it is an arena for the highest intellectual effort. We must show them that it is a place of the noblest culture and the finest reason. We must convince them that the highest education is not only the privilege of the intellectually fit but an impossibility for the intellectually unfit. And above all we must compel them to recognize the fundamental principle that there never can be a great university without great professors, and that great professors are the product of superior mental endowment, high and strenuous training, and a life of free, fresh, and energetic devotion to the pursuit of truth and culture.

Till America learns and practices this lesson its universities are destined to lag behind those of Europe. America, it is often said—said sometimes in astonishment and sometimes as a reproach—America has not contributed her share to the civilization of the modern world. We are told that our literature, our art, our philosophy, our science are none of them first class. I do not think we can rebut this criticism. And, what is worse, I do not see how we can escape it until we have places for the training of thinkers and scholars and scientists and artists. And our universities cannot now perform this essential function efficiently for obvious reasons. In the first place, they are overrun with throngs of mediocre, indifferent, and half-trained students. In the second

place, the energy of teachers is exhausted in the drudgery of training these young men and women, who might do vastly more for themselves and for the community if engaged in more congenial and more suitable pursuits. In the third place, the tendency is unavoidable to recruit our faculties largely with men adapted to the performance of the drill-master's task, which has become the major function of the institutions. And, fourthly, the professoriate falling thus into disesteem both socially and professionally, the compensation has declined below that of the mechanical vocations.

I recognize that we cannot change the fundamental conditions of American society. But I believe the American people want universities second to none in the world, and will be willing to furnish the means necessary for their support. Towards the realization of this high ideal I believe the most helpful first step would be the grading of our students and concentration of effort on the ablest and most devoted among them. But even before that reform it will be necessary to provide that men of high intellectual power, thoro training, and productive capacity shall be encouraged to devote themselves to the university career by the assurance of leisure for the application of their powers, in all the fullness of fresh energy, to the highest creative work as scholars, thinkers, and investigators.

THE UNIVERSITY AND MORAL AND RELIGIOUS TRAINING

I have been speaking of the university as essentially an organ of the intellectual life of mankind. But I have also shown that the discovery of scientific truth has an incalculable utilitarian value for the practical life of individuals and nations,—the application of science to industry having indeed contributed more than anything else whatever to their enrichment and to the comforts, conveniences, and even the luxuries of the modern world. But the aims of education are not exhausted by these achievements in both the rational and the material spheres of human life. For man also is a moral, spiritual, and political being; and the university, if it is to train the whole man, must endeavor to make good men and good citizens, and especially to train select youth for leadership in that great and promising field of moral, social, political, and economic service which is already white unto harvest.

Practical moral and religious training is to be accomplished at the university less by formal instruction in the classroom than by the example of teachers devoted to high ends, living honorable

lives, and conscientiously spending themselves for the improvement of their students and the promotion of the things that are true and honorable and lovely and of good report. I do not underestimate, on the contrary I highly appreciate and would do my utmost to encourage, the ministrations of preachers and other religious teachers and workers. The only point I am now concerned to emphasize is that all those moral and spiritual agencies are most effective in their practical influence on individual students when voluntary and dissociated from the official life and work of the university.

I shall not discuss the training of religious leaders, because owing to the variety of our religious denominations this function is generally performed in their respective theological schools. If I might presume to offer them a suggestion it would be to recommend a reorganization of the curriculum with the elimination of mere traditional subjects and the introduction of courses by competent experts dealing with the moral, social, and economic environment of modern humanity.

THE UNIVERSITY AS SOCIAL AND POLITICAL TEACHER

The life of man in society and the state is perhaps the most vital subject of contemporary thought and interest. As in the seventeenth and eighteenth centuries the greatest thinkers of the world gave themselves up to mathematical and physical research, and in the nineteenth to biological, so in the twentieth century they are turning to man—and especially to man as a social and political being—exploring his nature, investigating the institutions he has established, and assessing their value both in the scale of efficiency and by the standard of right and justice. Our science has hitherto been almost altogether naturalistic; it seems now destined to become humanistic also. You students are likely to see subjects like ethics, history, economics, politics, and sociology quickened with a new interest and invested with a new significance. They have become essential for the intelligent understanding of the institutional organization of our lives and for the correct appraisal of the challenges today made upon it, both at home and abroad, with ever-increasing emphasis and sometimes even with an unwonted accompaniment of hostility and revolutionary menace.

Many good people are perturbed. Some tremble for the ark of the Lord. And our rulers, it would seem, know no remedy but force and suppression.

O ye of little faith! Cannot error be overcome by truth? Nay, can anything else overcome it? Shall we cower in the presence of revolutionary Socialism and Bolshevism when we might learn from history and politics that our own system of Constitutional Democracy is the best government ever devised by the art of man? No doubt like every growing organism it is in need of continuous adjustment to its environment; but are we so blinded by ignorance and so perverted by Bourbonism that we cannot survey these natural and necessary modifications, whose effect is altogether ameliorating, with the equanimity and even the satisfaction of reasonable beings and good Americans? Because nations with the worst government imaginable have in this terrible crisis in the history of the world become political madhouses, must we with the best of actual governments lose our heads and join in their grimaces and contortions?

Let us possess our souls in confidence. Let us put our trust in truth. Let us speak the words of soberness. Let us trust the sound sense of the American people. Let us meet the folly and errors of the fanatics with the all-conquering weapons of fact and reason. If the Bolsheviks rule Russia by force and murder, let America, now as heretofore, govern herself by free discussion and enlightened public opinion and the deliberate vote of the majority. Our laws must of course be enforced, and sedition rigorously put down. But America cannot save her soul by stifling free thought and inquiry or by deporting ark-loads of alien revolutionists or denying constitutional rights to radical and even mischievous citizens and parties.

THE PROMISE OF SOCIAL REFORM

The university stands for truth. It is today summoned, as it never has been summoned before, to the exploration and propagation of truth in the fields of economics and politics. Our Bourbons, who put their trust in force, would even muzzle the universities lest they should discover some scientific warrant for changes in the order of our institutional life.

Changes are inevitable because the world moves and the realization of justice in society is a continuous and unending process. We shall find in the future means of improving our existing institutions at many points. There will be better and juster methods of taxation; property will be more widely diffused and more equally distributed and the power of wealth curtailed and pauperism

largely eliminated; public service will cease to be the arena and the means of private profit; equalization of opportunity will become a fact and not merely a shibboleth; education will be provided for the children in the country not inferior to that now offered in city schools; youth of talent in all economic groups will be selected and given the highest possible education; spiritual and intellectual callings will not rank lower than mechanical and industrial pursuits; and government, more democratic than ever, will be no longer a reckless strife of parties but an intelligent and business-like ordering of the public life of the community and a union with other civilized communities for the promotion of peace and good-will and prosperity thruout the world.

There are vast and unimagined possibilities for the future of the race. We can foresee not only better health and increased prosperity for mankind, but, what is more important, nobler character and higher reason and finer culture both for individuals and entire communities and their organization in juster and more perfect commonwealths. There are many agencies at work in the world contributory to that great consummation. But I speak alike with moderation and profound conviction when I say that the university, as the organ of truth and knowledge, is by far the most important and assuredly the most promising.

THE GROWTH OF INDIANA UNIVERSITY

For such service to the state and to mankind Indiana University was chartered one hundred years ago today. Already the memorable ordinance of 1785 had reserved the sixteenth section of every township of public land "for the maintenance of public schools within said township", and declared that "religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged".

The enabling act of Congress authorizing the formation of a state government for Indiana contained, among other items, the grant of an entire township to be designated by the President of the United States for the use of a seminary of learning. The convention which framed the constitution under which Indiana was admitted as a state accepted the grants of Congress and pledged that the ordinance should forever remain irrevocable and inviolate, thus obligating the state to cherish and sustain the institution thus founded. This same convention, as further endorsement of the

broad plan, declared in the constitution (article 9, section 2) that "it shall be the duty of the General Assembly as soon as circumstances will permit, to provide by law for a general system of education, ascending in regular gradation from township schools to a state university, wherein tuition shall be gratis, and equally open to all". This constitution was adopted in 1816. And on January 20, 1820, the General Assembly took the first definite step toward the establishment of Indiana University. It was opened in 1824 under the name of the Indiana Seminary, with one instructor and ten pupils, and the only subjects taught were Latin and Greek. It was raised to the dignity of a college in 1828, and in 1838 the General Assembly conferred upon it the name and style of Indiana University.

The growth of the University was for many years slow. Up to 1850 the maximum annual attendance was 115. And it did not reach 200 prior to 1884. It was 321 in 1890. And since that date the decennial figures indicate great and rapid expansion. In 1900 the enrollment was 1,016; it mounted to 2,564 in 1910; and now in 1920 it is nearly 4,000.

This enlargement of the student body and the consequent multiplication of courses has created for Indiana University the same problem as now oppresses the universities generally of the United States. Your enrollment has risen from 321 in 1890 to nearly 4,000 in 1920. But your teachers here in Bloomington, where the vast majority of these students receive their instruction, number only 129 in 1920 as against 28 in 1890.

THE CRISIS FOR AMERICAN UNIVERSITIES

I am sure that President Bryan, who has played such a large and honorable part in building up the University, will agree with me that Indiana and along with Indiana the entire sisterhood of American universities and colleges now face the gravest situation in their history. Fundamentally it is a question of the possibility of realizing and maintaining in America the ideal of a genuine university. I have endeavored to make clear what that ideal is and to indicate the perils by which it is menaced. The university is the organ of the intellectual life of mankind. Its essential constituent is a faculty devoted to the things of the mind and competent to promote them by research and inspiration and instruction. This function demands the best brains with which Providence endows mankind. Two causes, however, are today operating to deter the

ablest youth from entering on a university career. One is the insufficiency of the provision made for professorial support which drives ambitious and talented young men who are attracted to the intellectual life against their will into callings that offer them at least an adequate livelihood. The other is the lowering of the standards of university teaching in the effort to educate the masses of mediocre students who frequent the universities and the undue limiting for the same reason of the time and mental energy which the teacher may devote to independent scholarship and research. Unless we make and keep our universities genuine laboratories of creative intellectual work they will sink to the level of pedagogical institutes. Their salvation lies in able, well-trained, and intellectually alert professors with adequate provision for creative work on the part of all who are competent to undertake it.

THE FUTURE OF AMERICAN UNIVERSITIES

I have set forth with the utmost frankness the grave and even dangerous situation in which our universities today find themselves. A thoro knowledge of the evil is essential to reform. But let no one imagine because I have diagnosed the disease that I have any doubt of our ability to expel it. On the contrary, I have supreme faith in the ultimate soundness and vitality of the American university.

There are two considerations in particular that strengthen my faith and inspire my confidence. And with this personal confession I will close.

In the first place, the order of all development, cosmic as well as human, is first that which is natural, and next that which is spiritual. Hitherto we have been largely engaged in laying the material foundations of American universities. We have provided them with spacious grounds; with numerous buildings, large and useful, if not generally beautiful; with well appointed laboratories, well stocked libraries, and all kinds of equipment and illustrative material. I do not think any country in the world has ever before laid such solid and elaborate foundations for a system of universities. Good use, too, has been made of these establishments by the professors in charge. It is at once in harmony with the embryonic character of the institutions and with the practical talent and interest of the American people that their most conspicuous achievements should hitherto have been displayed in the field of applied science. This, however, is the *media via* from the natural to the

spiritual. And so I confidently anticipate the time when the energy which our people have hitherto put forth in establishing securely the foundations of their universities will be concentrated upon, and applied to, the intellectual and spiritual objects for the sake of which they exist. And when that day arrives the Archimedean boast, "give me leverage and I will move the world", may become a sober fact in the history of human civilization.

THE SPIRITUAL AND INTELLECTUAL RENASCENCE OF AMERICA

In the second place, I have an ineradicable faith in the idealism of the American people. No doubt we are a practical people, and we delight in turning material things to human uses. We have a high opinion of the value of mere physical comfort—of good clothes, good houses, and good food (tho Europeans consider us deficient in the art of cookery). Our manufacturers are enterprising, our traders shrewd, and our people generally want to make money, which is a thing that can be turned at any time into any kind of economic goods. Our environment, too, has stimulated the development of these practical talents and interests. For we have been called upon to subdue a hostile continent and make it safe for human habitation and generous for human subsistence.

But this work is now completed. The American people are at last free to gratify their native idealism. I believe that with all their practicality they are one of the most idealistic nations in the world. At times they carry idealism to the very verge of sentimentality. In great crises of their history—in the Civil War and in the recent World War—they have exhibited, and been sustained by, the noblest idealism. Now at the heart's core of all American ideals is a profound belief in the value of education and a devotion to it which overcomes all obstacles and endures every sacrifice. Witness the great words of the constitution of your infant state demanding "a general system of education in a regular gradation from township schools to a state university".

The day for the realization of the educational ideal of the American people has arrived. I appreciate to the full the magnitude and urgency of the economic and political tasks to which the new age calls us. But above all other voices I hear the angels of our higher nature summon us to a spiritual and intellectual renaissance of America.

RESEARCHES ON SPIROCHAETA PALLIDA

Aldred Scott Warthin was born in Greensburg, Indiana, October 21, 1866. He received the A.B. degree at Indiana University in 1888; the A.M. at the University of Michigan in 1890, the M.D. in 1891, and the Ph.D. in 1893; and a teacher's music diploma at the Cincinnati Conservatory of Music in 1887. In addition, he did postgraduate work in medicine at Vienna, Munich, Dresden, and Freiburg. In 1891, he became assistant in internal medicine at the University of Michigan, and the next year demonstrator in internal medicine, which position he held for three years. In 1896 he became demonstrator in pathology; in 1897, instructor; assistant professor in 1899; junior professor in 1902; professor and director of the pathological laboratory since 1903. Among the societies in which he has held office at various times are: American Association of Pathologists and Bacteriologists, president, 1908; International Association of Medical Museums, president, 1910-13; member of council for the United States in this same society, 1914-20; vice-president of its American section, 1914; Michigan Association for the Prevention and Relief of Tuberculosis, secretary, 1907; president, 1908-9; Michigan Social Hygiene Association, president, 1917-20; Ann Arbor Anti-Tuberculosis Association, secretary; International Association for Study and Prevention of Tuberculosis, corresponding member. He is a member of Phi Beta Kappa, Sigma Xi, The Association of American Physicians, and The Society for Experimental Medicine and Biology. Dr. Warthin is the author of *Practical Pathology*, editor and translator of Ziegler's *General Pathology*, the author of *General Pathology* and *Medical Aspects of Mustard Gas Poisoning*, and of over one hundred articles in medical journals and textbooks. He was the editor of the *Bulletin* of the International Association of Medical Museums from 1913 to 1919, and editor of the department of pathology in the second and third editions of Wood's *Reference Handbook of the Medical Sciences*. His most important researches are on the anatomy and pathology of the haemolymph glands, the pathology of diseases of the blood and blood-forming organs, cardiac syphilis, atant syphilis, tuberculosis, and toxic action of mustard gas.

RESEARCHES ON SPIROCHAETA PALLIDA

By ALDRED SCOTT WARTHIN

AS A GRADUATE of the literary class of 1888, I consider it, indeed, a very great honor to be chosen to represent the medical alumni of my Alma Mater, on this occasion, the Centennial of Indiana University. In his very gracious introduction, Dr. Wynn has offered an explanation of my scientific work, in that he has discovered that I am a nature lover and fond of the high mountains. But how could anyone come out of Indiana and not be so? I owe three very distinct influences upon my life and work to the circumstances of having been born in Indiana, graduated from a high school in a small country town of Indiana, and of having attended Indiana University. In the county in which I was born and passed the early period of my life three distinct geologic ages stood on edge across its surface, revealing themselves in all the banks and cliffs of the creeks and river valleys. The records of the life of past ages in the form of fossils were everywhere; even the very slabs of the village pavements exhibited the remains of corals, cephalopods, and crinoids to the interested eyes of the young Hoosier school-boys of that day. Alas, that such potent stimuli to early scientific interest and research should now be replaced by uninspiring cement! But the old stone slabs did excite us to the collecting of fossils and to the desire to find out the meaning of the strangely interesting things we dug from bank and cliff or gathered from the gravel of the streams. Actually, I believe that there is not a stream bed in Decatur county, Indiana, that, as a boy, in the tremendously exciting adventure of collecting, I did not measure, for the greater part of its course, upon hands and knees. To this potent influence of the natural environment, there was added in the high school period the inspiration of a wonderfully gifted "born teacher" of the natural sciences. May I take here the opportunity of paying tribute to the memory of William P. Shannon, a Hoosier school-master, obscure, and unknown to scientific literature or fame, but possessing in a most notable measure the divine fire of scientific enthusiasm and the art of inspiring others to the same appreciation of the wonders of the world of nature. Could any member of his high school classes ever lose from his life the effect produced, when

the teacher standing upon an outcrop of the Lower Silurian bade them look across the bed of the shallow sea of the Upper Silurian to the coral reefs of the Devonian, and pictured for them the conditions of those earlier ages! It was such an influence that led me to Indiana University in the early days of President Jordan's career there, and of the first faculty chosen by him. In many ways it was a very primitive University, indeed, but it was also unique in its atmosphere of intellectual freedom, and its insistence upon scientific methods and the worth of the sciences in an education. Can it be only thirty-five years ago that the warfare between the classics and the sciences was being so bitterly waged? Was it only so short a time ago that the family pastor urged against my going to the State University on the ground that it had a faculty of *infidels*!

There can be no doubt that the resuscitation of Indiana University by Dr. Jordan, and the ideals of intellectual liberty for which he and the majority of his colleagues stood marked a new era in American education. To those working with him the outside world became the greater University, exercising infinitely greater influence upon us than the confines of the classroom and the textbook. Again I crept along rocky ledges and the banks of streams, explored underground caves, collected and studied the fauna and flora of Monroe and Brown county woods and hills in the passionate pursuit of a knowledge of life and the world inhabited by it. Much more of an education did I receive from those woods and hills than from the curriculum itself. And so to Indiana and to Indiana University I wish to give thanks for the part they have played in my education. For the passion yet remains of seeing things minutely, of caring for finest details, of comparing and contrasting, of discovering likeness and difference, of knowing things fully, and endeavoring to add some new fact to the sum of knowledge already acquired by the race. And this has led me in the years of my own scientific activities to the pursuit of the knowledge and the investigation of disease and the causes of disease. It may seem a far cry from the woods and limestone ledges of Indiana to the interstices and crannies of the organs and tissues of the human body, but the adventure has been the same.

I consider it a very great honor to be asked at this time to give you a resumé of my researches in the pathology of one of the most important diseases afflicting mankind, syphilis, the "Captain of the Band of Death", as Osler put it. For five centuries no other disease has been so well known to the medical profession in its clinical aspects as has syphilis. Its insidious and often latent

course, its relationship to disease of the bones, liver, and central nervous system, and its very frequent manifestation in various forms of skin affections, as well as its congenital transmission thru one or more generations, its apparent incurability,—all of these facts have long been recognized. The great European pathologists and clinicians of the latter half of the nineteenth century express their appreciation of the importance of the disease in such aphorisms as “syphilis, the most protean of all diseases”, “Know syphilis, and you know all medicine”, or “Syphilis is ninety per cent of all dermatology, and fifty per cent of all internal medicine.”

Nevertheless, in spite of such appreciations of the importance of this disease from the most experienced masters of medicine, syphilis has been and remains to this day to the average practitioner a *dermatologic* affection. Its tremendous importance in internal medicine has not been, and even today is not, generally recognized, because of the fact that the early manifestations of syphilis, the chancre and the various syphilides, are chiefly cutaneous, the disease has come to be thought of as dermatologic, and its diagnosis and treatment to be the concern of the dermatologist. Only the syphilitic affections of the central nervous system have been conceded as lying legitimately outside of the field of dermatology. The internist, especially, has been very slow to realize the fact that non-dermatologic syphilis forms a very large part of his material, and that syphilis is often masquerading in the form of the heart, vascular, hepatic, or other organic disturbances presenting themselves to him. He frequently has suspected this, but in the absence of positive etiologic and pathologic proof has not in the past been able to justify his suspicions.

Even the pathologist up to within the last fifteen years has suspected many pathologic conditions to be syphilitic without being able to prove positively that they were. The etiologic agent was unknown, his pathologic criteria for the positive histologic recognition of syphilis were limited to the caseating vascular granuloma, known as *gumma* or *syphiloma*, that since 1874 has been practically the sole lesion accepted by pathologists in general as syphilitic in nature. Without the presence of a definitely gummatous lesion no pathologist dared to make a positive pathologic diagnosis of syphilis, however strong his convictions might be that certain non-gummatous conditions, such as arteriosclerosis, aortic aneurysm, hepatic cirrhosis, orchitis fibrosa, tabes, paresis, leucoderma, leucoplakia, and other conditions frequently associated with

the recognized lesion of syphilis, or with a definite clinical history of syphilitic infection might be actual syphilis, or the results in some way of this disease. In explanation of the relationship to syphilis of these non-gummatous conditions, both clinician and pathologist were forced to the hypotheses of "*postsyphilitic*", "*metasyphilitic*", and "*parasyphilitic*" processes—conditions bearing a certain relationship to syphilis, but which were not this disease, nor even necessarily caused by it.

Up to the last decade our knowledge of the pathologic lesions of syphilis has been limited to the conception of the gumma, and the pathology of syphilis, as given in our textbooks today, is essentially based upon the occurrence of this type of granuloma. As late as the Harvey Lecture in 1915, Fordyce says: "Aside from gummatous involvement of the viscera little is known of the effects of the infection on the various organs." Gummata, however, are relatively rare, particularly in certain organs and tissues, and this is the explanation of the fact that the recognized pathology of syphilis has never been able to correlate itself with either the clinician's or the pathologist's suspicion of a much greater incidence and importance to be ascribed to syphilis than the frequency of occurrence of the gumma would indicate.

Only with the discovery of the etiologic agent of syphilis, in 1905, did it become possible for us to make progress in our knowledge of this disease. My own clinical and pathologic studies in Vienna during the nineties had convinced me of the tremendous importance of syphilis. As other pathologists had done, I also had noted the association of aortic aneurysm and arteriosclerosis with cases of known syphilis, and with tabes and paresis. In addition I was struck by a similar association in the case of fibroid myocarditis, chronic interstitial pancreatitis, fibroid orchitis, and slight localized inflammatory changes of a very chronic character in many organs and tissues. These I suspected to be syphilitic in nature, but could not prove it.

With the announcement of the discovery of *Spirochaeta pallida* by Schaudinn, in 1905, and the corroboration by the other investigators, during the following year, of the association of this organism with syphilitic lesions, I at once, in 1906, began a series of investigations that have occupied me largely during a period of almost fifteen years. It is the result of this long period of investigation that I am now intending to present to you in a very condensed form, aided by a series of lantern slides that will, I think,

speak more clearly and forcibly than any verbal description can possibly do.

My first investigations were concerned with congenital syphilis of the heart. In a series of cases of congenital syphilitic infection I was able to demonstrate conclusively the fact that the heart is one of the chief organs involved in congenital syphilis, that *Spirochaeta pallida* occurs in great numbers in the myocardium, often without causing any recognizable changes in the heart muscle, in other cases associated with focal fatty degeneration, atrophy, or necrosis of the muscle, while other cases still show a definite form of myocarditis due to the presence of the spirochaetes. This form of myocarditis had been noted once only in the literature as possibly syphilitic in character, and this supposition I was able to confirm with certainty by the demonstration of the constant presence of the spirochaete in this form of tissue lesion. This type of myocarditis is characterized by diffuse infiltrations of lymphocytes and plasma-cells, fibroblasts and angioblasts, with a relatively slight new-formation of stroma or reticular tissue, often semifluid or mucoid in character, giving mucin-staining reactions. These lesions occur in the intermuscular spaces, along the smallest vascular branches; less frequently do they develop around the larger coronary branches. They occur also in the endocardium and in the pericardium; congenital syphilitic endocarditis and pericarditis are realities. The myocardial changes vary in degree, from very slight proliferation of the interstitial cells to larger infiltrations that may take on the character of gummata. Caseation is, however, very rare. Associated with this type of myocarditis there occur rarely myxoma-like masses of the same type of cells replacing the heart muscle, and containing large colonies of spirochaetes. In the interstitial form the spirochaetes occur in great numbers, either diffusely or localized in the infiltrations; any portion of the heart wall may be involved. The number of the spirochaetes, however, bears no definite relation to the severity of the reaction.

A fortunate series of autopsy cases of congenital syphilis in older children, adolescents, and young adults threw further light upon the nature of myocardial syphilis and its relation to fibroid heart. Progressive and permanent damage to the heart muscle, with resulting fibrosis and cardiac insufficiency, were found to follow directly upon the type of myocarditis described above. Active lesions and healed ones were found existing in the same heart, even in cases as old as twenty-one years. In congenital cardiac syphilis the lesions are more widely scattered than in the

adult myocardium, the right ventricular wall being as often involved as the left. Fibrosis is the ultimate sequela.

Other features of congenital syphilis were also studied with reference to the localization of the spirochaetes and the associated lesions, particularly in the case of the liver, spleen, pancreas, and placenta. The same type of pathologic lesion as in the myocardium was found to be the rule; gummatous lesions were the rare exceptions. It was demonstrated beyond any doubt that the essential lesion produced in congenital infections by the *Spirochaeta pallida* was of the nature of a mild interstitial or productive inflammation, leading ultimately to fibrosis and diminished function. It must, however, again be emphasized that in congenital syphilis the spirochaetes may occur in various tissues in enormous numbers without the production of any changes in the tissue-elements recognizable by any of our methods of examination, thus indicating a high degree of commensal adaptation.

From the study of congenital cardiac syphilis it was a natural step to the study of myocardial changes in acquired syphilis. My autopsy material gave me abundant opportunity for this. The hearts of cases of known syphilis were first studied, particularly those of aortic aneurysm, tabes, paresis, and other forms of chronic syphilis. The histologic study was carried along parallel with the search for the spirochaete by means of the Levaditi silver-impregnation method. In every case of known syphilitic infection characteristic lesions were found in the myocardium, in the form of slight, or more marked, infiltrations of lymphocytes and plasma cells between the muscle fibres. These infiltrations are diffuse or patchy; very rarely are they focal or sharply circumscribed. Miliary infiltrations occasionally occur, but larger caseating gummata of the myocardium are very rare. In the great majority of cases the infiltrations are of very slight degree, the cells being arranged in close single file between the fibres. To the inexperienced observer there may seem to be only a slight increase of the interstitial nuclei. Polymorphonuclears rarely occur in these infiltrations, and eosinophiles are not present. The cells of the infiltration are probably chiefly histiogenetic and endothelial lymphocytes and young formative cells derived from the stroma. Larger epithelioid fibroblasts are also very common in the healing areas. There is an increase of the reticular fibres; in the earlier and more active areas fluid spaces occur between the fibres, and in these a staining-reaction for mucin is often obtained. Evidences of a progressive healing and fibrosis are always present in the chronic cases. In older healed

areas the stroma becomes fibroid and hyaline. The fibroid heart is the ultimate outcome of these interstitial lesions. The heart-muscle fibres are apparently very resistant to the infection, but as the stroma increases and becomes fibroid, and with the obliteration of the capillaries, the muscle becomes atrophic and many of the fibres disappear, so that the cicatricial areas increase in size.

The myocardial lesions in acquired syphilis are found chiefly in the wall of the left ventricle, in the anterior portion of the wall just above the apex, the adjacent portion of the septum, and less often in the posterior wall of the left ventricle near the mitral ring. The infiltrations are found more frequently near the endocardium than toward the epicardium as in congenital syphilis. These lesions are in the great majority of cases microscopic, and may be found in marked degree, even when there are no gross changes in the heart. In other cases dilatations, hypertrophy, atrophy, and fibroid patches in the wall of the left ventricle are apparent in the gross examination. Thrombosis of the left ventricle, aneurysmal dilatation of the anterior wall just above the apex, and rupture of the heart occur as sequelae of syphilitic myocarditis. I have seen over thirty cases of thrombosis of the left ventricle in which the thrombus was attached directly over an area of syphilitic disease in the ventricular wall.

In the myocardial lesions spirochaetes of syphilis have been demonstrated often enough to convince me that they are due to nothing but the *Spirochaeta pallida*, and that they represent absolutely specific lesions of syphilitic infection. The search for the spirochaete is, however, very difficult and time-consuming in the case of chronic acquired syphilitic infection. The organisms are not numerous, and many blocks and great numbers of sections must often be examined before a group of the spirochaetes may be found. Moreover, the Levaditi method, the most reliable method available during the greater part of the time in which this research was in progress, is very capricious, and so much depends upon freshness of tissue, conditions of fixation, etc., that the method must be regarded as a difficult one, even in the hands of experts. For this reason, my laboratory has also engaged itself with the problem of improving the technical methods necessary for the demonstration of the spirochaete. My own modification of the Levaditi method has been found to give better and more constant results than the original; but we have recently replaced this method by one much superior, which I shall describe later.

From the study of hearts of known syphilis our studies progressed

to the hearts of patients in whom a syphilitic infection had never been recognized or suspected. Such cases appeared in my autopsy material in striking numbers—in about forty per cent of the entire autopsy material. The majority of the patients showing an unrecognized latent syphilis present the clinical picture of the cardiovascular-renal complex. Their symptoms were those of cardiac incompensation, myocardial insufficiency, hypertrophy or dilatation of the heart, chronic passive congestion, general arteriosclerosis, and frequently renal disease. They died a cardiac death; and the microscopic lesions in these cases were identical with those found in known cases of syphilis, and in them also were found repeatedly typical spirochaetes of syphilis. These cases, therefore, were syphilis—latent infections, unrecognized. In other cases giving history of early infection but supposedly cured and running many years without recognizable signs of syphilis, with negative Wasserman reactions, the same tissue-lesions in the heart, associated with the presence of *Spirochaeta pallida*, were found.

Taking up the aorta in all of these cases, also known cases of syphilis, "cured" and uncured, and unrecognizable clinically, the microscopical examination showed characteristic infiltrations of plasma-cells and lymphocytes along the course of the vasa vasorum thru the adventitia and media, associated with slight or marked atherosclerotic changes. An aorta presenting no pathological changes to the naked eye may show on microscopic examination typical syphilitic infiltrations in media or adventitia. The gross appearances of the aorta cannot be taken as an absolute criterion of the condition of the vessel. Syphilis of the aorta may exist in apparently normal aortas, or in aortas showing the picture of an ordinary atherosclerosis, or when the gross pathologic picture is that of a syphilitic mesaortitis. In these aortic lesions the spirochaetes are found with greater difficulty than in the myocardium. The number is usually small. The more active the process, the more easily found are the organisms. The lesions are found most often in the arch of the aorta and in the abdominal portion. Our work has confirmed the syphilitic nature of aortic aneurysm. I have not seen a single instance of the latter that was not syphilitic. While in congenital syphilis a localization of spirochaetes in the intima of the aorta may occur, I have never noted such in the aorta in acquired syphilis. The atherosclerotic changes in the intima and media appear to be due to a slow anaemic infarction resulting from the obliteration of the arteries of the vasa vasorum. The lymphocytic and plasma-cell infiltrations are

in the early stages most marked in and around the walls of the small arterioles; later these become obliterated by a concentric proliferation of the endothelium, giving the appearance of a small tubercle or gumma.

Similar syphilitic lesions were found in the pulmonary artery and in the wall of an aneurysm of the latter vessel, with demonstration of the spirochaete. The microscopic changes are the same; infiltrations in the adventitia and media, along the vasa vasorum, with obliteration of the latter and the production of atherosclerotic changes in the intima. A similar syphilitic mesarteritis of the pulmonary arteries was found also in a case of chronic cyanosis and polycythemia (Vaquez's disease), enabling me to interpret this case as one of "Ayerza's disease", the first one to be reported in this country. It was noted also that sclerotic changes in the pulmonary arteries were not uncommon in the lungs of cases presenting syphilitic lesions in the myocardium and other organs; and that a more or less patchy fibrosis of such lungs was usually coincident.

Extending the study of syphilis of the arteries to the femoral and popliteal arteries and their larger branches, as well as to the walls of aneurysms of these vessels, identical syphilitic lesions with those in the aorta and pulmonary artery were found. In one case the entire systemic arterial trunks and their smaller branches showed the most marked degree of syphilitic inflammation associated with multiple thromboses.

Following the study of syphilis of the blood vessels, the pancreas of all cases showing syphilitic lesions in the myocardium and aorta was carefully studied. In all of the older cases of syphilis the pancreas showed more or less atrophy, with patches of chronic interstitial pancreatitis. In every one of these cases active areas of plasma-cell infiltrations, with stroma increase, were also present. These lesions were identical in kind with the syphilitic lesions of the myocardium and aorta and in two of the cases *Spirochaeta pallida* was demonstrated in the pancreatic lesion. Syphilis of the pancreas had been practically unknown before. It is a most interesting fact that out of twelve cases of diabetes coming to autopsy, only two did not show the presence of syphilitic lesions in the pancreas and other organs. If interstitial pancreatitis leading to fibrosis of the islands of Langerhans is a cause of diabetes, then syphilis being a cause of this condition must be reckoned with in the etiology of diabetes.

In the adrenals of cases showing syphilitic lesions in the heart, aorta, and pancreas, the same small infiltrations of lymphocytes

and plasma-cells were found. They occur in the medullary portion or in the inner portion of the reticular zone. In three cases of Addison's disease the syphilitic infiltrations and fibrosis were so marked as to cause nearly complete atrophy of the organ. Syphilitic infiltrations were found also in the semilunar and adrenal ganglia. Another striking feature observed in the adrenals of chronic syphilis was a marked lipoidosis of the cortex.

The liver of all the cases of latent chronic syphilis, as well as in clinically active cases, showed chronic passive congestion and atrophy, while inflammatory lesions, varying from slight infiltrations of the periportal tissues to the most severe forms of cirrhosis, were also constant findings. Ten cases of atrophic cirrhosis, one of the Hanot type, and three of the Glissonian, occurred in this material, in addition to five cases of gumma and eight cases of *hepar lobatum*. All of these showed characteristic plasma-cell lesions of the same type as in the other organs.

In all male cases of acquired syphilis, active or latent, the testes showed marked lesions in the form of atrophy, fibrosis, and plasma-cell infiltrations. Spermatogenesis was diminished in the mildest cases, and in older, more severe infections the entire organ may be fibroid. The interstitial cells remain preserved, and often appear hypertrophic, even in cases in which the patients had complained of a premature loss of sexual desire. It is evident that the testes are especially affected by the syphilitic infection. In congenital syphilis enormous numbers of spirochaetes may be found in this organ without any perceptible histologic changes; but in the older cases the spirochaetes occur only in the active areas of infiltration. A seminal transmission in old and latent syphilis seems very probable.

It is impossible, in the time allotted me here, to take up each individual organ and tissue in detail. It must suffice to say, that in the brain and spinal cord, in the spinal nerves and ganglia, in the prevertebral tissues, root of mesentery, along the branches of the portal vein, in the pelvic tissues, in the lungs, and elsewhere, there constantly are found in the bodies of old syphilitics minute perivascular infiltrations of lymphocytes and plasma-cells, associated with fibroblastic and angioblastic proliferations, leading to obliteration of the vessels, and eventually to fibrosis. Only in the spleen, kidneys, ovary, and uterus have such typical lesions of latent syphilis not been found; but it must also be stated that no especial study has as yet been made of these organs.

The results of these researches are very important; in fact,

they have been said to be epoch-making in so far as the history of syphilis is concerned. They show that the gumma is not the essential pathological lesion of syphilis, but that it is, on the contrary, a relatively rare formation. The great majority of cases of syphilitic infection run their course without the formation of gummatous granulomas.

The essential pathology of late or latent acquired syphilis is the occurrence of a chronic irritative or inflammatory process, characterized by lymphocytic and plasma-cell infiltrations in the stroma about the blood-vessels and lymphatics, with slight angioblastic and fibroblastic proliferations, leading eventually to fibrosis and atrophy of the parenchyma, with corresponding loss of function. In the active lesions relatively avirulent spirochaetes are found in small numbers; these disappear as fibrosis develops.

The syphilitic becomes a "spirochaete carrier", the host of an organism symbiotic in a high degree. In this respect it is to be classed with the trypanosome, organisms of malaria, the bacilli of leprosy and tuberculosis, the pyogenic cocci, and perhaps even more commensal organisms, as the colon bacillus, etc.

Syphilis is a generalized process from the very beginning most probably. The spirochaetes spread thruout the entire body, and colonize particularly in the interstitial tissues, around the smallest blood-vessels, especially in the nervous system, myocardium, aorta, liver, pancreas, adrenals, and testes. Wherever they produce irritation, the characteristic inflammatory infiltrations are found. In individual cases especial predilection for one system, organ, or tissue may be shown; but there is, as yet, no explanation of such predilections. The infection is a steadily progressive one. Healing areas and active ones occur side by side, and in the old cases the evidence of extensive healing is found in the occurrence of widespread fibrosis. I have, however, seen no case histologically "cured"; in every one examined active syphilitic areas were still present. "Cured" syphilis is latent syphilis, and the carrying of the spirochaete produces an immunity against new infection with this organism. The price paid for this immunity is the slowly progressive defensive inflammatory infiltration, which after many years results in fibrosis and atrophy, with a corresponding diminution of function, asserting itself clinically as myocarditis, aortitis, aneurysm, hepatitis, diabetes, tabes, or paresis, or in other milder forms of functional disturbance.

Mild for many years, the syphilitic infection may at any time rise violently above the clinical horizon in more virulent form, and with

a more rapidly progressive course. What lies at the bottom of this increase in virulence or lowering of tissue-resistance we do not yet know. The individual affected with syphilis has always this sword hanging over his head. It may fall at any time, or it may never fall; but his expectancy of life is lowered, and he is most likely to die a premature death from affections not ordinarily recognized as syphilis. Particularly does he die a myocardial death. My work has shown that death in the middle years of life is in an extraordinary degree the result of latent syphilis—the result of a long period of a mild infection with a highly symbiotic organism producing slight injuries, until the sum total of such injury causes functional disturbances leading eventually to death.

This work throws also much light on the question of the incidence of syphilis in our population. It is undoubtedly much greater than is usually supposed. Latent syphilis undoubtedly lies at the bottom of many conditions not suspected of being syphilis, either because the patient gives no history or sign of having ever had a chancre or skin lesions, or having had these, is regarded as absolutely cured. Undoubtedly many cases are innocent infections, many congenital, and many acquired without any recognition of the earlier stages and without any diagnosis until years after.

My work has shown further that the ultimate diagnosis of syphilis is a microscopic one, resting upon the microscopic determination of specific tissue-lesions caused by the *Spirochaeta pallida*. The etiologic agent of the disease being known, and the characteristic lesions produced by it now demonstrated by this work, the importance of syphilis in producing internal affections and disorders has been made clear, and the *Spirochaeta pallida* receives consequently an increased pathogenic value. More than ever is syphilis the "Captain of the Band of Death"!

In solving the etiologic problem of so many internal disorders, the way to prevention and therapeutic management is also indicated. The individual infected with syphilis usually receives an intensive treatment for a limited period, after which he is discharged as "cured". If he is a "spirochaete carrier" with certain possibilities of danger to him because of that fact, the damage resulting from the latent infection may be reduced to a minimum, by careful attention to general hygiene and an avoidance of all conditions tending to lower the general resistance of the body. A periodic antisyphilitic treatment may also serve to keep the infection from becoming more virulent at any time.

Since the diagnosis of syphilis depends upon the demonstration of the spirochaete in the tissue-lesions it becomes very necessary to obtain a method by which this can be carried out as quickly and easily as possible. Levaditi's silver-impregnation method has been the only method available. This has, however, required ten to fourteen days, and the tissue is impregnated in mass, so that histological control is difficult, as it cannot be applied to single sections. Moreover, the results obtained by this method are very uneven and uncertain. In connection with Mr. A. C. Starry, the writer has evolved two methods, by which silver-impregnation is carried out in single sections mounted on cover-glasses, cut from paraffin-embedded formol-fixed tissue. Ordinary diagnostic blocks can be used. With the second of these methods, our agar-silver method, preparations of spirochaetes can be obtained within one hour after cutting the sections and mounting them on cover-glasses. We have found this method, moreover, to be much more certain of good results than the original Levaditi, and have obtained spirochaetes by its use in tissues in which the original Levaditi absolutely failed. We consider this method a great technical advance in the demonstration and study of *Spirochaeta pallida* in the tissues.

In closing, the researches outlined above create a new pathology for an ancient disease, and thereby, a new clinical attitude and an altered therapeutic conception. The aphorisms of the older physicians have been confirmed, the suspicions of the older pathologists justified, and syphilis stands today revealed in truth as the Great Killer of mankind.

THE UNIVERSITY MEDICAL SCHOOL AND THE STATE¹

By ALDRED SCOTT WARTHIN

THE SPEAKER preceding me has spoken of state medicine. I wish to go a step farther than he has done and to say a few words for *university* state medicine or *state university* medicine, as you may choose to interpret it.

The great social ferment of the times, following upon the upheaval of the Great War, does not leave medicine untouched. The profession of the art and science of healing, in its origin an institution of social service, but developing, thru the exigencies of modern civilization, more and more into a business vocation in which large financial rewards are possible to the successful practitioner, does not today escape the charge of commercialism. Assertions are made, that, in spite of all the social service medicine still renders thru the medium of charitable institutions, a large per cent of the working population does not, or cannot, have efficient medical treatment or adequate protection from disease. The laborer does not want charity, but only the very rich can obtain the most highly skilled medical service. Based upon these claims arises the cry for a further socialization or nationalization of the practice of medicine, in the form of "compulsory health insurance", "state medicine", "communal medicine", and the like.

The strength and significance of this movement cannot be doubted, and the medical profession cannot ignore it. In this country the Association for Labor Legislation has for several years conducted a vigorous campaign for compulsory health insurance, and its program has received the approval and vigorous support of the majority of the labor organizations, as well as of other societies or associations less directly connected with labor. It has become a plank in a political platform. In eight states commissions have been appointed for the consideration of a health insurance program, and in two states actual health insurance bills have already been introduced. In England, the National Insurance Act was passed without adequate consultation of the medical profession upon whom the burden of carrying this law into effect was thrown; and again

¹Response to toast at a dinner given at the Claypool Hotel, Indianapolis, May 5, 1920, for the guests and the medical faculty of the University.

in 1919, the income limit, within which insurance in England was made obligatory, was extended, with certain exceptions, from £160 to £250, without consulting the practitioners at all. In the report of the Local Government Board for 1917-18, it was shown that of the 24,000 registered practitioners of England and Wales, over 16,000 were engaged in insurance domiciliary practice, while the great majority of the others were associated with some kind of communal medical service. We may well ask, what further extensions may be demanded, and granted? Shall compulsory health insurance be extended to all classes of citizens? Shall all medical work be placed upon a communal basis, with the practitioner acting as the full-time salaried servant of the community? A few medical men support this latter program with enthusiasm; but from the reports of committees in the American Medical Association and many local medical societies, the majority of American practitioners would reject it as undemocratic, destructive to initiative, freedom of action, and the personal relation, so important in the practice of medicine.

But that some form of communal medicine is inevitable, there can be no doubt. In fact, it is already here. The greatest function of the state is the preservation of the life, liberty, and happiness of all its citizens; and this means the preservation of the health of its citizens. It is to the self-interest of the state to keep its citizens well. Upon this line the state has already proceeded far, in its development of preventive medicine, thru the communal mechanisms of state and local departments of health. Public safety against the epidemic contagious diseases was primarily sought, but state medicine has been extended to occupational diseases, industrial hygiene, child labor, protection of water supplies, disposal of sewage and garbage, street cleaning, medical and dental inspection of school children, mothers' pensions, educational campaigns against the fly, mosquito, tuberculosis, and the venereal diseases, and along a hundred other lines of preventive medicine. The state also assumes to take care of its insane and mentally incompetent, and in some degree of its indigent sick, in some form of charity at least. In the full development of its function in the prevention of disease the state health department has developed the diagnostic laboratory, by which means bacteriologic, serologic, toxicologic, and even pathologic examinations are furnished free, or at cost. The most important and productive field of medicine, today, and to many minds the most attractive, is that of preventive medicine, rather than curative.

The advances in state preventive medicine have been very notable in the more advanced states of the Union, altho much yet remains to be accomplished in this field of state medicine. The division of the state into communal health districts, according to population, with the establishment of local laboratories and health centers, as provided in the bills introduced in several of the states, will place state preventive medicine on a still higher plane of efficiency. The question, however, that we must now face is the enlargement of the field of state medicine from its present one of the prevention of disease to that of the diagnosis and treatment of disease. Shall the state invade the field of the practice of medicine?

That some form of state diagnostic and curative medicine is coming is inevitable. It may be found necessary as the final development of preventive medicine; or it may come as the only solution of our medical social problems. Indeed, as far as the first necessity is concerned, the state has already undertaken curative measures in the case of rabies, malaria, hookworm infection, tuberculosis, and the venereal diseases, as well as affections of the eyes, nose, and teeth, and orthopedic conditions. If the necessity claimed, of insufficient and inadequate medical service for the laboring classes, actually exists, then either compulsory health insurance or some other form of state medicine must be developed to give them the medical help they should have. The majority of the American medical profession apparently regard compulsory health insurance as non-American, undemocratic, and destructive of personal initiative and liberty; but to an alternative plan of state medicine by which the state can offer to those who need it, at rates within their means, efficient diagnostic and medical services from skilled, or event expert, laboratory men, physicians, and surgeons, there seems to be but little opposition. Such medical services should be elective, and not obligatory. A mechanism by which such a state medicine can be accomplished has already been touched upon by the previous speaker, in the form of health centers, scattered throughout the state, according to density of population, each center to have attached to it a hospital for the diagnosis and treatment of disease, with a staff of full or part-time salaried laboratory and clinical experts, who will give an equal service to all who ask treatment, the compensation for such services being determined by the income or earning-power of the patient. But many practical problems present themselves, as to the means of financing and the control of such communal hospitals. The evils of political patronage, apparently so inseparable from our state health ser-

vices, could create infinite damage if introduced into medical practice. What more dangerous union could be imagined than that of politics and communal medical service!

This brings me to the chief point I wish to make; and that is in the event of the adoption of any form of state medicine of the kind just described, the control of such local hospitals should be under the state university medical school, their policies directed by it, and the standard of service and the fitness of the medical appointees determined by the ideals of medical education inculcated by that institution. Why should not the state, thru its university school of medicine, enter the field of medical practice, and give to all of the citizens of the state who desire it the service of the best men in medicine it can enlist in its faculty? Where should the best medical men in the state be but on that faculty? A state hospital, or several, or many state hospitals, under the control of the university medical school, would seem the ideal way of developing a really efficient form of state medicine. A central hospital at the school itself, with local branches developed to meet the needs of different communities, a body of full-time salaried laboratory and clinical men of the highest type, chosen on university criteria, possessing teaching and research qualities and the desire for social service, giving equal service to all who apply, and a compensation determined by income or earning-power—all of this seems a practical and sane form of state medicine. I believe that this is a feasible plan and that it would result in a highly efficient system of state medicine. It would pay its own way.

Progress has already been made in some of the states towards such a system. If I may be permitted to point out what a sister state, Michigan, has already accomplished, you will realize the advanced position she is holding in state medicine today. However, the beginnings were not primarily altruistic. With a medical school located in a small university town, it became necessary in the earlier years of the school's development to obtain clinical material for the instruction of the medical students. Fortunately for the university, and for the state, various efforts to remove the medical school to the neighboring city of Detroit have never been permitted to succeed, and the school remains at Ann Arbor, where it has developed for itself adequate clinics for instruction with an abundance of clinical material, and, incidentally has furnished a striking example of *university state medicine*. The evolution has been a most interesting one. The university hospital is not, and has never been a charity hospital; it has but a few free beds, and

these have not been furnished by the state. It has offered its services—those of a well-trained group of teaching clinicians—at a low or moderate cost—to the citizens of the state, who had not the means to pay the regular charges for such services, or who were sent for consultation to the hospital by any practitioner of the state. As a concession to the profession of the state, the university hospital was not made available to the well-to-do or the rich of Michigan, except as the physician of such patients desired to send them there for aid in diagnosis or treatment. In addition to the service rendered the poorer citizens of the state, the hospital thus became used as a consulting center. As the service rendered to the state came gradually to be appreciated by the citizens, various bills were passed by the state legislature, with the effect not only of increasing the clinical material available for instruction, but also of emphasizing the hospital's social service to the state. One of these public acts, passed in 1913, provided for the medical and surgical treatment at the university hospital of any child deformed, or afflicted with a malady that can be remedied, and whose parents are unable to provide proper treatment, such child to be sent to the hospital thru the probate judge of the county, the expenses of such treatment to be audited by the auditor-general, and paid by the state to the university. In 1915, another act provided free hospital service, and medical and surgical treatment to any adult legal resident of any county who can be benefited, and who is unable to pay for such care and treatment, as well as for the care of any pregnant woman unable to pay, and for the children of such during the period of hospital care, under a similar probate court jurisdiction, and payment of the hospital expenses by the state or county.

The result of the social service thus rendered to the state of Michigan by its university hospital has been a greatly increased appreciation of this service by the citizens, and a growing tendency toward a further development of this form of state medicine. The hospital facilities becoming inadequate, the last legislature was asked for a new and adequate building, the entire cost to be extended over a number of years in divided grants. In place of the smaller sum asked for, an immediate grant of one million dollars was voluntarily offered and given, the sentiment in the legislature being for an extension of the services rendered by the hospital. In the history of state university requests and legislative grants, when did the like occur before? Such an event certainly marks a new era.

One form of state medicine—the state university hospital—has,

therefore, shown itself practical and worthy. It has won the confidence of the citizens of the state to such an extent that it is now entering upon a new stage of progress. The two chief clinical departments, medicine and surgery, have been put upon a full-time basis, with salaried clinicians working for the hospital alone. The rich, as well as the poor, are to be treated equally, the compensation to be adjusted to ability to pay; the hospital, itself, is to become commercial to the extent of paying its way from the income received. This stage of development is still experimental; the outcome will be watched with great interest by all other medical schools, particularly those of the state universities. Iowa has already followed Michigan to the extent of copying the laws above mentioned, furnishing clinical material to the state university hospital. Upon the success of Michigan's new venture will depend the action of other schools. It is evident that new problems are involved in the new scheme. Under the old plan of half-time clinicians engaged also in private practice, the private hospital grew up for the accommodation of the well-to-do excluded by law from the state hospital, but who desired the services of the same body of clinicians. Under the new system these parasitic institutions must pass away. Will the old commercialism, however, be replaced by another form, even more dangerous to medical teaching and research than the divided interests of the old situation? In any scheme contemplating a division of profits such a danger is a very real one; but with a fixed salary basis it could not exist. Undoubtedly the right men for this work are those who would welcome a fixed adequate salary, with the added opportunities for teaching and research.

In closing, some form of state medicine seems inevitable. I believe that the safest form would be, what I have attempted to outline above, a system of state hospitals, or a hospital, controlled by what should be the most enlightened body of medical men in the state—the faculty of the state university medical school—in other words, a state university medicine. What Michigan has accomplished in this direction is also possible for Indiana University and your Medical School. Such an institution in Indiana will do what it has done for the University of Michigan, it will bring the citizens of the state into a closer relation with the University, it will make them more sympathetic with its needs, lessen opposition to increased taxation and greater budgets, and make for greater understanding and appreciation of all the functions of the University.

GRADUATE MEDICAL EDUCATION: EXPERIENCE WITH THE MINNESOTA PLAN

Elias Potter Lyon was born at Cambria, Michigan, October 20, 1867. He received the B.S. degree at Hillsdale College in 1891, and the A.B. in 1892; the Ph.D. at the University of Chicago, 1897; the honorary M.D. at St. Louis University in 1910; the LL.D., St. Louis University, 1920. Dr. Lyon became an instructor in Hillsdale College in 1890, where he remained for two years, going from there to the Harvard School, of Chicago. From 1897 to 1900 he was in the Bradley Polytechnic Institute at Peoria, Ill. He became assistant professor in Rush Medical College in 1900, which position he held for four years. From 1901 to 1904 he was also assistant professor of physiology and assistant dean in the University of Chicago. In 1904 he became professor of physiology in St. Louis University Medical School, where he became dean in 1907. Since 1913 he has been professor of physiology and dean of the University of Minnesota Medical School. Dr. Lyon was biologist in the Cook Greenland Expedition in 1894, and investigator for the United States Bureau of Fisheries from 1908 to 1911. He was a member of the staff of the Marine Biological Laboratory for ten years. He is a fellow in the American Association for the Advancement of Science, a member of the American Physiological Society, of the Society of Naturalists, and of the Society for Experimental Biology and Medicine; he was president of the Association of American Medical Colleges, 1913-14. He is a contributor to the *American Journal of Physiology* and other biological publications.

GRADUATE MEDICAL EDUCATION: EXPERIENCE WITH THE MINNESOTA PLAN

By ELIAS POTTER LYON

MEDICAL SPECIALISM is indispensable and the training of specialists is of vital importance, alike to the medical profession, to the general public, and to the state. I propose to discuss the question of the education of specialists in general, and then tell you what we are doing as regards the education of medical specialists at the University of Minnesota.

Let us note first how specialists are trained and tagged in some other professions.

Consider first the profession of college teaching. If you examine the faculty list of any of our great colleges, you find that most of the professors have the letters Ph.D. following their names. Others are masters of arts or science. There are doctors of philosophy in chemistry, physics, and the other natural sciences; in history, economics, sociology; in language and literature. Just what does this degree mean?

First, you may be sure that in almost all cases the Ph.D. is an earned degree.

Second, you may be certain that before he started to earn his Ph.D. the student had a fair preparation, as evidenced by a bachelor's degree.

Third, the Ph.D. means that the possessor worked for three years or more on the particular subject for which the Ph.D. was awarded. It means that he also acquired a thoro working knowledge of related subjects. If he is a Ph.D. in chemistry he did considerable work in mathematics and physics, because without these he cannot know chemistry. The Ph.D. indicates, to use our familiar medical word, that the holder is a "specialist" in some field of knowledge.

Fourth, the Ph.D. connotes something which is of special interest to this audience because there is a feeling among doctors of medicine against the word "philosophy". They think that the Ph.D. implies impractical theorizing, a detachment from the world and the world's affairs. Some men, it is true, may be impractical and detached, but it is not their degrees that make them so. On

the contrary, the possession of the Ph.D. (and this is the fourth point referred to), implies the possession of the technique of the branch of knowledge for which the degree was conferred. This is quite apparent if we take such a science as chemistry, where acquaintance with the methods is indispensable. A man must know how to use the methods, else he is not a chemist. But there is just as truly a technic of history, a technic of mathematics, a technic of archæology.

Fifth, the Ph.D. implies that the possessor has done at least one piece of creditable research, his doctoral thesis. This again implies that he is familiar with some of the original literature, knows how to work in a library, and has developed some critical judgment.

Sixth, the Ph.D. placed after the name of one of your faculty implies that some university thru its responsible experts has certified to all of the foregoing. Naturally these experts have found it necessary to subject the candidate to some sort of examination before such certification. Thoro written and oral examinations before faculty committees constitute the ordinary mechanism for the purpose.

Naturally, your University in selecting a professor or instructor cannot look upon the degree alone as sufficient qualification for appointment, but at least the degree is a mark of serious preparation in some given specialty. And the graduate school which conferred the degree is an organization for the education of specialists.

The Minnesota idea or experiment is merely that the mechanism of the graduate school can be used to instruct, standardize, and certify medical specialists exactly as well as scientific and literary specialists. It can give them thoro knowledge; it can give them technical experience; it can start them on the road to research.

Some medical men may be inclined to think that the only diagnosis a doctor of philosophy in a teaching position is able to make is a diagnosis of ignorance; and that his only prescription is a dose of mathematics or chemistry or Latin—as the case may be. That his only death certificates are flunk notices; and that, finally, he is engaged in a despicable form of contract practice for a starvation salary. However, most of you on a little more reflection will admit that in the crisis of war the university scholar was able to extend expert service to the nation; that in the present condition of society his diagnosis and suggestions should be sought; and that the present drain of college professors into business and industry indicates that their specialized training and knowledge are valuable in the world of affairs.

The truth is that what the world needs is productive scholarship as exemplified by men who can grapple new situations, men with a broader training than that obtained in the ordinary college or in the experience of business, manufacturing enterprises, or industrial processes. The graduate school selects, trains, and certifies such scholars. No institution of learning is really a university unless it supports an active graduate school where research and the training of investigators are the primary aims.

If we turn now to agriculture, which as a profession is based, like medicine, on applied science, we find that quite generally the certification of experts has taken the same form as that described for the expert in language, literature, or science. Doctor's and master's degrees are given in university graduate schools in such subjects as soil chemistry, animal husbandry, and plant pathology. The holders of such degrees occupy in large measure the prominent positions in college work, government experiment stations, and private highly organized agricultural enterprises. In a considerable number of cases they establish offices for themselves and offer their services to the public on a fee basis exactly as do doctors of medicine. I know a man who is a doctor of curative and preventive medicine for timber. Lumber men consult him with reference to tree diseases, and railroads call him to "cure" their ties and bridge beams. He tells them what "medicine" to use in particular situations, and they actually speak of this as timber "treatment".

In engineering, specialization begins in the undergraduate course. A man graduates as a civil, mechanical, electrical, mining, or chemical engineer. This is safe and practicable in engineering because the young engineer is not likely to assume any heavy responsibility. On the contrary, the young doctor's first case may be a life or death affair.

Quite in harmony with what we should expect, there is little real graduate work in engineering and little research in engineering schools. The same thing is true of law, in which self-made specialism is also the rule. It seems to me, therefore, that we in medicine should take our cue for graduate work from the sciences and agriculture, rather than from engineering and law.

I shall now try to make clear exactly how the University of Minnesota has adjusted the ideals and machinery of the graduate school to train medical specialists.

The graduate school is the division of the university which offers instruction in advance of the bachelor degree. It is consequently

the division chiefly concerned with research and with the training of investigators and specialists of all kinds. The dean of the graduate school is Professor Guy Stanton Ford, head of the department of history. The school has an executive committee representing the great groups of subjects, such as social science, natural science, medicine, and agriculture. It has a faculty consisting of those men in all departments of the university who have been chosen by the dean and executive committee as fitted to give advanced instruction and to train research students. The Mayo Foundation for Medical Education and Research is a part of the graduate school, and certain of its members are on the graduate school faculty. Similarly, certain members of the faculty of the medical school are members of the graduate school faculty. But membership in the medical faculty does not necessarily give membership on the graduate faculty.

All graduate work is conducted under general rules prescribed by the graduate faculty, but the detailed control of each great branch is under a special committee; for example, the committee for agriculture and the committee for medicine. The latter committee consists of the president of the university, the deans of the graduate and medical schools, Director Louis B. Wilson of the Mayo Foundation, Professors J. P. Sedgwick, C. M. Jackson, J. C. Litzenberg, and L. G. Rowntree of the medical school, and D. C. Balfour, W. F. Braasch, and M. S. Henderson of the Mayo Foundation. The committee, which is organized as two subcommittees located respectively at Minneapolis and Rochester, is the immediate administrative body for all graduate work in medicine and makes recommendations to the dean and executive committee of the graduate school, and thru them to the board of regents, on the appointment of fellows, the appointment of members of the graduate faculty, the conferring of degrees, etc. Particularly this committee is charged with recommending the annual budget of the Mayo Foundation.

Under this organization a student may work for the degree master of science or the degree doctor of philosophy in any of the pre-clinical sciences such as anatomy or pathology, or in any of the clinical branches. For admission to graduate work in the sciences a bachelor's degree is required; for work in the clinical branches the M.D. degree from a "Class A" school and a year of internship are required, in addition to the bachelor's degree or its equivalent.

Many of the graduate medical students, but not all, hold fellowships. By this is meant that they receive small annual

salaries and are expected to give a certain amount of service. At Minneapolis the fellows assist in the clinics, or in teaching medical students, or in the conduct of the University Health Service. The Burch Fellow assists at Dr. Burch's office. There is a new fellowship in tuberculosis supported by the Hennepin County Anti-Tuberculosis Committee. We hope to see a large number of such fellowships gradually developed as endowments or more temporary gifts. At Rochester the fellows are assistants in the Mayo Clinic, St. Mary's Hospital, and the various laboratories.

Educationally the service, whether teaching or assisting, is valuable, because it contributes to the students' knowledge and power. Economically the system of fellowships finds indorsement in the fact that few men are able financially to undertake a long graduate course after the six years of the regular medical course and the year of unpaid internship. It is not essential to the plan, however, that all graduate students hold fellowships. Some pay their own way and carry on their studies without obligation of service.

All graduate teaching is essentially individual. There are few classes; few required lectures. Every student is under a faculty advisor who is responsible for making out the student's program from year to year. Every student selects his major subject and also a minor or supporting subject. For example, major in pathology and minor in anatomy; or major in pediatrics and minor in biochemistry. The student's advisor must see that the student gets thoro, all-round training in his major, a fair knowledge of his minor; and also sufficient acquaintance with any other work which may be fundamental to either major or minor. At the beginning of the second year's work each candidate for the Ph.D. is required to submit, with the approval of his advisor, a tentative program for his entire course, which requires the approval of the graduate medical committee.

The primary purpose of the graduate school is to make productive scholars. Productive scholars must be able to earn a living; consequently they must be trained as skilled specialists in practical technical fields. Really these are two aspects of the same job which the graduate school must do. The training of scholars takes time; hence the rule requiring at least two or three years for an advanced clinical degree. A scholar must be familiar with the literature of his specialty; hence the requirement of a reading knowledge of French and German. The test of productive scholarship is original investigation; hence a thesis involving new facts in

some phase of the major subject is required. The certification of advanced scholarship is a serious responsibility; hence the graduate school demands searching written and oral examinations of all candidates for the Ph.D. degree. For the master's degree in the clinical branches we expect as thoro training in diagnosis and other technical procedures as for the Ph.D. degree. But the thesis and the final examinations are not so exacting.

These in general are the requirements. They are quite different from those of an undergraduate college. There is no hand feeding, no formal reciting, no prescribed lessons, no reporting of absences, no routine laboratory exercises. The essential environment consists of libraries, laboratories, and clinical material, with competent supervision—and, above all, criticism. The student with his advisor as a guide is turned loose to educate himself. Mostly he learns by doing, which is the natural way. If he has stuff in him when he arrives. If he is only an imitator or absorber or bluffer, he shows what he is.

In the winter quarter, the University of Minnesota had 169 graduate students in medicine who were candidates for higher degrees, 37 of whom were at Minneapolis and 132 at Rochester. There were also 23 graduate students at Rochester and a few at Minneapolis who were not candidates for advanced degrees. This is the largest number of strictly graduate medical students anywhere. About 20 will come up for degrees at the coming commencement. The student body is of a high order. There are many more applicants than available places, particularly in surgery, urology, pediatrics, and oto-laryngology.

Now, if you have followed this hasty sketch you will see that in a sense every medical school and every good hospital is a center of graduate work. There are assistants in the laboratories and clinics who render service and receive in many cases small salaries but who are there primarily to learn. However, you who are teachers do not usually think of these men as students. You assume no responsibility for their education. You do not lay out definite work for them; especially you do not look to their training in the fundamental sciences. You may favor research, but few feel it their duty to insist upon it as part of the training of assistants. Your institution takes no responsibility for these men; does not acknowledge them, when they leave you, as alumni. Many of them go out well trained, but you have no standards which they may set before themselves and which you may enforce. There is no goal to be striven for. There is no certification of quality which

either the man can value or the public can rely upon. It is just in these particulars that we believe the Minnesota plan of supervised, formal education to be superior to the hit-or-miss method under which most specialists in this country—practically all, indeed, worthy of the name—gained their right to that title of distinction.

To accomplish our purpose we have to arrange matters that would not be thought of unless we had in mind the ends to be attained. We know that good training in the laboratory branches is essential, and that the undergraduate medical student gets only the elements of these subjects. We have to arrange that the graduate students shall have time for such work; that materials and a place to work are provided; that instructors are at hand when needed. At all times about twenty-five graduate students, many of whom are majoring in clinical branches, are at work in the department of anatomy. More are in pathology; some are in biochemistry. The department of physiology gives advanced work in optics for students of ophthalmology, and so on. This adds work, but also interest and enthusiasm to our laboratory departments.

Then there is the thesis, required for reasons already set forth, and highly valued in our scheme of graduate medical education. A student cannot do research if he is kept busy all day examining patients. We have to arrange time for research. At the Mayo Foundation the fellows are on a "double shift". One group works in the clinic mornings and the other afternoons. Every man has several hours each day for work in the laboratories and for seminars, demonstrations, reading, etc. At Minneapolis our system is less formal, but we see to it that ample time is provided for these purposes. You must do this if you wish to produce a scholar rather than a technician.

Our motto that these men are students and not employees or assistants or servants is kept always before us in considering their welfare. One of the Pediatrics' fellows is now in New York for some special study. His stipend goes on. Dr. Jackson tells me he recently found one of the Mayo fellows in the Surgeon-General's library digging away on his thesis bibliography. His expenses were being paid by the Mayo Foundation.

In clinical training, also, supervision is exercised. In surgery care is taken that operative skill is not put before diagnostic ability. In medicine, the comparative study of complete histories of cases in large groups and the laboratory side are insisted upon. In pediatrics, experience in contagious diseases is required. Just now one

of the Pediatrics' fellows is serving as resident in contagious diseases at the Minneapolis General Hospital, and the university continues his stipend. Another is to go there as resident in medicine.

In our opinion it is the graduate school with its definite requirements and rigid rules which influences students and faculty alike toward concrete ends well thought out in advance. One has but to note the responsibility which the professor feels for his graduate students and the pride he exhibits over their achievements in order to be convinced of the advantages of our plan of organization. Once a quarter at Rochester each student is graded by his advisor and other instructors on the basis of their personal knowledge. This tends to a feeling of responsibility on the part of instructors and creates a constantly critical as well as helpful attitude.

The University of Minnesota began the plan of graduate medical teaching six years ago. The Mayo Foundation became part of the university five years ago. The first degrees were conferred three years ago. The war interfered with our work, but the following list gives the names and thesis subjects of the men graduated in clinical branches during the past three years:

- G. L. McWhorter, Ph.D. (surgery): "Some Clinical and Experimental Observations on Gastric Acidity".
- Rood Taylor, Ph.D. (pediatrics): "Hunger in Infants".
- H. W. Woltmann, Ph.D. (neurology): "The Brain Changes associated with Pernicious Anemia".
- R. E. Morris, Ph.D. (medicine): "The Graphic Recording of Reflexes, Clonus, and Tremors".
- E. L. Crispin, M.S. (medicine): "Clinical Studies in Abdominal Disorders".
- F. B. McMahan, M.S. (surgery): "Primary Pulmonary Carcinoma and Its Roentgen Diagnosis".
- H. W. Meyerding, M.S. (orthopedic surgery): "Cystic and Fibrocystic Disease of the Long Bones".
- A. W. Adson, M.S. (surgery): "Experimental and Clinical Results of Nerve Anastomoses".
- V. C. Hunt, M.S. (surgery): "Torsion of Appendices Epiploicae".
- F. A. Olson, M.S. (surgery): "A Study of the Roentgenographic Findings in Renal Tuberculosis".
- J. de J. Pemberton, M.S. (surgery): "Blood Transfusion".
- C. E. Nixon, M.S. (neurology): "The Pathogenesis of the Lesions of the Nervous System found in Cases of Pernicious Anemia".
- Carleton Dederer, M.S. (surgery): "Transplantation of the Kidney and Ovary".

- E. J. Horgan, M.S. (surgery): "The Histogenesis of Carcinoma in the Islets of the Pancreas".
- I. W. McDowell, M.S. (surgery): "Cancer of the Stomach".
- W. O. Ott, M.S. (surgery): "Surgical Aneurysms".
- W. J. Tucker, M.S. (surgery): "Infections of the Kidney".
- T. B. Reeves, M.S. (surgery): "A Study of the Arteries Supplying the Stomach and Duodenum and their Relation to Ulcer".
- E. H. Weld, M.S. (surgery): "Renal Absorption with Particular Reference to Pyelographic Mediums".
- J. L. Butsch, Ph.D. (surgery): "Ulcers of the Gastro-Intestinal Tract with Special Reference to Gastro-Jejunal Ulcers".
- L. W. Barry, Ph.D. (obstetrics and gynecology): "The Effects of Inanition in the Pregnant Albino Rat with Special Reference to the Changes in the Relative Weights of the Various Parts, Systems, and Organs of the Offspring".

"Not a very formidable list", you may say. But they are all good men. Five of them are now on our medical faculty. One is on the Rush Medical Faculty. Several are on the staff of the Mayo Clinic. When other universities begin to call men of this type of training to their chairs, we shall have medical faculties which are more than selected representatives of the local practitioners. Our medical faculties like our arts and science faculties will be cosmopolitan bodies of productive scholars.

Perhaps we may even solve the perplexing problem of the full-time teacher in the clinical branches by creating a race of doctors interested in the pursuit of science and in the academic life! This may be a vain dream, but during our long polar winters in Minnesota it is pleasant to dream.

However, we naturally expect that most of our graduates will go into special practice. We think they are prepared. They may not, at graduation, have had as much clinical experience as those who spend an equal time as assistants in a big clinic. But we believe that the better foundation in science and theory, the stimulus of systematic study, and the experience in research more than counterbalance. We know that the practitioner will be in contact with cases all his life; with teaching laboratories, perhaps never again.

Now the reaction of some of you to what I am saying may be somewhat like this: "Oh, this is a fine scheme. But it must take a lot of money. A rich university like Minnesota can carry it out, but we could not." That's just where you make a mistake.

The University of Minnesota is not rich. It is true that we have the splendid facilities of the Mayo Foundation. But without that and without more money than the Medical School needs for undergraduate teaching, we could do something worth while.

Every major university has a graduate school. Probably your laboratory departments of the medical school are already part of it. You have but to organize your clinical departments in relation to the graduate school, lay out your courses of study, enroll your instructors, residents, and other existing clinical assistants as students, and think of them and treat them primarily as students. As soon as you create this atmosphere for faculty and students alike, you will have a graduate school of medicine on the Minnesota model. On account of the informal nature of the instruction and the use of existing facilities, the expense will be slightly, if any, greater. We believe it will pay you to consider this subject.

Naturally the question arises whether the universities of the country could supply the need for specialists if all were to be trained as I have outlined. Can we expect that at some time an advanced degree will be the universal title to specialism?

The committee on graduate work of the Council on Medical Education has recently reported, thru its chairman, Dr. Louis B. Wilson, that there are above 2,000 assistantships, residencies, etc., in the "Class A" medical schools. This would be a considerable body of students if organized and instructed as our plan demands. It is from this body that specialists have been and are chiefly recruited. But is this number adequate?

Dr. Wilson's figures show 235 such places in ophthalmology and oto-laryngology. However, Dr. Edward Jackson, of Denver, has estimated that this country needs 10,000 ophthalmologists—one to 10,000 population—and that 400 new ones will be required each year. I think it will be agreed that the existing clinical facilities of medical schools would not properly train such a number. But does that mean that the universities should not attempt to meet the need nor contribute the great weight of their influence as examining and standardizing institutions? I think not.

In the first place, the universities constitute the only place where training in the science laboratories can be obtained. They must hold out the necessity of such training for specialists and prepare themselves to offer it. The medical teachers, both laboratory and clinical, must stand ready to supervise research, approve theses, and offer final examinations. As for clinical training, it matters little where it is obtained, provided it is good; and the graduate

school is broad-minded in the matter of *in absentia* study. I offer the suggestion that, gradually, strong clinics all over the country may become affiliated with graduate schools, and their assistantships take the form of fellowships under the Minnesota plan. The university, of course, must assume the responsibility for the adequacy of the instruction and for the final certification of the student. But I believe this is a legitimate function of a university which less and less will be a cloister, and more and more a part of the world. Such a plan, universally carried out, would at length make the universities the training camps for medical specialism, just as they are now for pure science.

We are, perhaps, about to take a significant step in this direction at Minnesota. The chief of our department of ophthalmology and oto-laryngology, Dr. W. R. Murray, has outlined a one-year course in laboratory and theoretical work for prospective specialists in his field. Very little clinical work would be included, the students being expected to get that later in special clinics or hospitals for eye, ear, nose, and throat. No degree or certificate would be given for the one-year course; but one has but to imagine a student, after this year, securing the privilege of *in absentia* registration in an approved clinic, selecting a topic for research and carrying it to completion in a satisfactory manner, and finally passing satisfactory examinations in accordance with the rules of the graduate school in order to obtain a degree from the University of Minnesota. It is not at all impossible that this may happen in particular instances. Personally, I hope it will happen.

You will note that I have said nothing of short courses nor of the so-called postgraduate schools existing apart from universities. The Committee of the Council of Medical Education, already referred to, has recently visited all such schools; and you are referred to the excellent report about to be published. Suffice it that these schools chiefly supply continuation courses for general practitioners and extension courses for men already partially trained in a clinical specialty. "Few [postgraduate] schools attempt to give complete special preparation for practice in limited clinical fields."

That there is need of opportunities for practitioners to obtain additional training in short courses there can be no doubt. But I cannot see how medical schools with undergraduate classes can supply this need. What is required for the practitioner on vacation is well organized class instruction for small groups, with ample clinical material for illustrative purposes. The undergraduate medical school can fit long-term graduate students into its organi-

zation as assistants and teaching fellows to the actual strengthening of undergraduate teaching. But it cannot admit groups of short-time students in any such way. The medical school may admit physicians to regular classes and clinics and to its laboratories. It may organize summer courses, but it can hardly be expected to do more.

My notion is, therefore, that the short courses for practitioners should be developed in special schools organized for the purpose. I do not like the name "postgraduate", and perhaps a better one can be found. In the great cities there are hospital facilities not used for undergraduate medical instruction. They ought to be used for practitioner courses. The important question is organization and staff. As long as only fees are available, the best results are far away.

I would like to be turned loose in New York with a free hand and five million dollars of endowment. I would organize short courses for practitioners with competent paid instructors. I would tie up the school with the extension department of some university, for there is where short-course instruction belongs. But I would have all my full-time assistants enroll in the graduate school under the Minnesota plan. With this two-edged sword I should expect to make some havoc with hydra-headed ignorance. But this again is a cold-storage dream, which we will now carefully place next to the ammonia coils in the archives of this meeting. Perhaps fifty years from now someone may bring it out and say "what a good suggestion that is, and in such a good state of preservation!"

Having wound up and run down, it only remains to stop. I shall be satisfied if I can strike twelve before the pendulum ceases to swing.

1. Specialism is a necessary and permanent part of medicine.
2. The education of specialists is very important.
3. All prospective specialists need further training in the laboratory sciences.
4. All prospective specialists should learn the history and literature of their field.
5. All prospective specialists should learn research methods.
6. As many specialists as possible should be competent and continuous contributors to the specialty.
7. Every medical specialist should be a competent clinician.
8. The university is the best organization for giving these various sorts of training.

9. The university should standardize, supervise, and certify, with appropriate degrees, this training.
10. The graduate school was organized for just this purpose, so far as science and language are concerned.
11. The training of medical specialists under the graduate school organization and ideals is the Minnesota plan.
12. The Minnesota plan works.

THE THOMAS JEFFERSON THEORY OF EDUCATION

Samuel Moffett Ralston was born in Tuscarawas county, Ohio, December 1 1857, and is a graduate of the Central Indiana Normal College (Danville). He was admitted to the Indiana bar in 1886, and practiced at Lebanon until he became governor of Indiana on the Democratic ticket in 1913. During Governor Ralston's administration the levy for the state educational institution fund was raised from two and three-fourths cents on the hundred dollars to seven cents. Of this amount Indiana University received by this act two and four-fifths cents, instead of one cent, on each hundred dollars of taxable property. (The General Assembly of 1921 passed an act which changes these provisions to a certain extent.) Since 1917 Mr. Ralston has practiced law in Indianapolis.

THE THOMAS JEFFERSON THEORY OF EDUCATION

By SAMUEL MOFFETT RALSTON

THOMAS JEFFERSON was an advocate of the popular will. This is another way of saying that he stood for the rule of the people. To the outside world, as well as to the citizenship of the American Republic, no other man in this country represents, in so high a degree, faith in the masses as does Jefferson. He was born an aristocrat, yet he was thru and thru a commoner. Instances can be cited of men born in the humblest walks of life who afterwards became aristocrats. Argument does not have to be addressed to a thorogoin American to convince him that men of the former class are immeasurably superior as citizens of this country to those of the latter class. This is necessarily true, else the theory of our government is false.

Jefferson's devotion to the interest—the common interest—of all the people is seen underlying every great measure he ever advocated. In his first draft of the Declaration of American Independence he showed his abhorrence of human slavery, altho his sentiments as expressed were not retained in the Declaration as finally adopted. Long before any of his contemporaries saw the evil of the system, he declared in opposition to a measure of the Virginia legislature, which did not contain an emancipation provision:

What a stupendous, what an incomprehensible machine is man, who can endure toil, famine, strifes, imprisonment, and death itself, in vindication of his own liberty, and, the next moment, be deaf to all those motives whose power supported him through his trial, and inflict on his fellow men a bondage, one hour of which is fraught with more misery than ages of that which he rose in rebellion to oppose.

Lincoln believed, however, that the Declaration of Independence as it came from the pen of Jefferson, with its slight modifications, was broad enough to embrace all men of whatsoever color, for in his opposition to the spread of slavery he made this reference to Jefferson and the Declaration of Independence:

All honor to Jefferson, to the men who, in concrete pressure of a struggle for national independence by a single people had the coolness, forecast and capacity to introduce into a mere revolutionary document an abstract truth, applicable to all men in all times, and so to embalm it there that today and in all days to come it shall be a rebuke and a stumbling block to the very harbinger of reappearing tyranny and oppression.

If the great emancipator were living today, he would doubtless not be offended at the promulgation of truths "applicable to all men in all times" and designed to broaden the sweep of civilization and to keep the world at peace.

The references I have thus made to Jefferson are quite sufficient to show that he would not have been true to his nature or loyal to his conception of truth and the underlying principles of our government if he had not been an advocate of an educational system broad enough to embrace all the people. He was such an advocate and a very effective one.

Considering the times in which and the conditions under which Jefferson lived, I doubt if this country has produced a man whose contribution to the cause of education has equaled his, and yet our educators and schools of today are giving him but little, if any, credit for his labors in this field of public service.

Last Saturday I examined one of the latest encyclopedias and six other separate volumes on the subject of education and I found a reference in only one of these connecting Jefferson's name with that subject. That reference was this quotation from him on the relation of democracy to education:

There are two subjects, which I claim a right to further, as long as I breathe, the public education and the subdivision of counties into wards. I consider the continuance of republican government as absolutely hanging on these two hooks.

WILLIAM AND MARY COLLEGE

Jefferson was an alumnus of William and Mary College. He was always strongly attached to his Alma Mater, but he did not think it was pursuing as broad lines as in justice to itself and the the public it should adopt. Holding these views, he first attracted attention to his interest in education when, in 1776, he proposed a revision of the curriculum of this institution with striking innovations:

1. A chair of modern languages—and among modern languages he included Anglo-Saxon, which he truly urged was simply "old English".

2. In the foundation of this school, provision was made for a school for Indian boys. Jefferson proposed as a substitute for this the appointment of a missionary who should visit the Indian tribes and investigate their laws, customs, religions, traditions, and more particularly their languages, constructing grammars thereof, as well as may be, and copious vocabularies.

The work he sought to have undertaken in 1776 by this institution of learning was entered upon a hundred years afterwards by the Bureau of Ethnology. If it had been started in Jefferson's time, we might now know a great deal that is hopelessly lost. The suggestion of the study of Anglo-Saxon, which Jefferson always insisted on, and which is now adopted in various colleges, was the first made in this country.

BILL FOR DIFFUSION OF KNOWLEDGE

It was three years subsequent to his attempt to change the curriculum of his Alma Mater that he first attracted in a broad sense public attention to his passion for an educated citizenship. This he did by introducing in 1779 in the Legislature of Virginia "A Bill for the More General Diffusion of Knowledge". He was then but thirty-three years old and had never been overseas to get any of his ideas from foreign countries. The preamble to this measure set forth most lucidly, and, I think most eloquently, Jefferson's reason for believing that the happiness of mankind depends upon a system of education broad and rational enough to afford the people the means of enlightenment. I quote a part of it:

And whereas it is generally true that that people will be happiest whose laws are best, and are best administered, and that laws will be wisely formed, and honestly administered, in proportion as those who form and administer them are wise and honest; whence it becomes expedient for promoting the public happiness that those persons, whom nature hath endowed with genius and virtue, should be rendered by liberal education worthy to receive, and able to guard the sacred deposits of the rights and liberties of their fellow citizens, and that they should be called to that charge without regard to wealth, birth or other accidental condition or circumstance; but the indigence of the greater number disabling them from so educating, at their own expence, those of their children whom nature hath fitly formed and disposed to become useful instruments for the public, it is better that such should be sought for and educated at the common expence of all, than that the happiness of all should be confined to the weak or wicked.

Under this law the qualified voters of every county were required to choose annually three of the most honest and able men of their county as aldermen, whose duty it was to divide their county into hundreds, an English term, regulating the size thereof so that they would

contain a convenient number of children to make up a school, and be of such convenient size that all the children within each hundred may daily attend the school to be established therein.

In this provision is seen the principle of local self-government.

This law set forth the branches that should be taught in these

schools. They were reading, writing, and common arithmetic. Jefferson was always partial to a study of history. He appreciated keenly the great advantages to be derived from a study thereof, but in establishing his system of education he was fought at every turn by those who were opposed to being taxed for popular education. It behooved him, therefore, to devise a system that would enable children attending the primary schools to acquire therein all the knowledge possible. So he wisely provided that instruction in reading should be given from books that would impart a knowledge of Grecian, Roman, English, and American history. Not a bad idea to be followed today and it is now, I am glad to see, in a measure being adopted.

All free children of both sexes were entitled to receive these educational advantages free of charge for three years, and beyond this period, at their own expense, if they or those over them chose. This provision for the coeducation of boys and girls preceded by ten years the time when Boston first allowed girls to attend her public schools. How the ears of this "hub" of culture could be made to burn by comment on this fact at a suffragist meeting.

SCHOOL SUPERVISION

Jefferson was far-sighted enough to see that even a law creating an educational system for all the people would result in but very little good to the public unless it was wisely operated. He, therefore, made provision for a supervision of these local institutions on which we have made but little, if any, improvements. Under this law

Over every ten of these schools an overseer shall be appointed annually by the aldermen at their first meeting, eminent for his learning, integrity, and fidelity to the commonwealth, whose business and duty it shall be, from time to time, to appoint a teacher to teach school, who shall give assurance of fidelity to the commonwealth, and to remove him as he shall see cause; to visit every school once in every half year at the least; to examine the scholars; see that any general plan of reading and instruction recommended by the visitors of William and Mary College shall be observed; and to superintend the conduct of the teacher in everything relative to his school.

The standard for measuring an overseer of these primary schools on the mountain sides and in the valleys of the Old Dominion was certainly as exacting as are the qualifications we require for our county superintendents. The overseer was to be a man eminent for his learning. Certainly we are not demanding anything beyond this in our school superintendents in that respect. He also had

to be "eminent for his fidelity to the commonwealth". We make no such requirement of our superintendents today.

"Fidelity to the commonwealth" is a happy and most suggestive phrase. When we induct a man into public office we have him to take an oath to support the Constitution of the United States and the constitution of Indiana, but we are never over-scrutinizing as to what the facts show as to his fidelity to the commonwealth. Under Jefferson's plan "fidelity" was also a qualification for a primary teacher. He believed that the virtues of a state should be reflected by the mind and heart of an instructor, and that unless they were he was not a safe guide for children.

GRAMMAR SCHOOLS

Jefferson's scheme as set forth in the bill we are discussing created grammar schools in which there were to be taught the Latin and Greek languages, English grammar, geography, and the higher part of numerical arithmetic, that is, vulgar and decimal fractions and the extraction of the square and cube roots.

It is interesting to note the equipment that was to be provided for these schools. The buildings were to be of brick or stone; offices were to be placed on the school grounds. The grammar school was to contain a room for the schools, a dining-hall, four rooms for a master and usher, and ten or twelve lodging-rooms for the scholars. I use "scholars" because that is the word used in the bill.

Among the scholars that were to be admitted to the grammar schools were those who had attended at least two years at some one of the schools in the hundred and whose parents were too poor to educate them further. They were to be of the best and most promising genius and disposition and they were to be appointed by the overseer of the hundred after the most diligent and impartial examination and without favor.

LOCATION OF SCHOOLS

There were no public health boards in Jefferson's day to determine the location of schoolhouses. I am glad to say, however, that there would have been had my good friend, Dr. Hurty, then been born.¹

This did not prevent Jefferson, however, from considering the impediment poor health is to the acquisition of an education. Con-

¹Dr. Hurty is Secretary of the State Board of Health of Indiana and is so earnest in his work that his enthusiasm excites praise.

sequently when he came to provide by law for the establishment of grammar schools he was careful to make it the duty of the overseers in locating the schoolhouse to place it "as central as may be to the inhabitants" of the county; to provide that it have good water, that it be near a supply of provision and fuel, and that the location "be healthy" (healthful).

UNIVERSITY OF VIRGINIA

In addition to his plan for primary and grammar schools, Jefferson favored the establishment of a university for his state. He wanted an institution of this character in which all the branches of science then deemed useful should be taught in their highest degree. With great particularity he classified the sciences that should be taught. He maintained that the professors to hold chairs in his proposed university must be men about the finish of whose education and qualifications there could be no question. He set his standard high, when he first launched his movement for an educational system and he never lowered it. He believed that at the outset teachers from overseas would have to be secured, and they were to give to this institution, when established, the splendor and pre-eminence desired for it.

Here it is proper to add that, by a system of selection, pupils of "the best and most promising genius" in the hundred schools were to receive free instruction in the academies; and, by continued selection, the most promising were to get "free" instruction in the university.

A LONG STRUGGLE

Jefferson's plans were not carried out until 1818, nearly forty years after he inaugurated his fight for an educational system designed for the enlightenment of all the people. His common school feature was not adopted fully, an appropriation by the state for these schools being substituted for their support by local taxation, as urged by Jefferson. But the action obtained in 1818 was directly under Jefferson's influence, the active agent in the legislation being Joseph Carrington Cabell.

Cabell was himself an educated man, having studied several years in German schools. He became interested in Jefferson's educational theories and successfully brought about his own election to the Virginia Senate, in which he served for twenty years.

During all this time his central thought and greatest efforts were given to embodying in the form of law the Jeffersonian theory of education, which embraced popular education and free schools by local taxation and a university to be supported by the state. Cabell was truly a patient and faithful patriot. Had it not been for him, the University of Virginia would not have been created, in my judgment, when it was, if ever.

The university was founded under the law of 1818 on Jefferson's plans, not only as to its methods of instruction, but also as to its system of government and the arrangement and construction of its buildings, for many of which he made with his own hands the architectural drawings. Some of its original features that have since had quite general adoption are the following:

1. The elective system of studies under which the student follows the lines he specially desires, instead of a fixed course outlined in a curriculum. Jefferson never could understand why a boy with an aptitude and liking for mathematics, but none for Latin and Greek, should be denied the right to become a first-rate civil engineer because he couldn't master the roots of a tongue foreign to his own.

2. Student self-government, or putting the student "on honor" as to his conduct, with the student body as the tribunal for passing on individual infractions of discipline.

3. Nonsectarian religious instruction.

4. Manual training and vocational instruction. These subjects are attracting wide attention today and in giving instruction in them, educational institutions are touching upon almost every practical phase of life, involving manual labor. Jefferson saw the importance of this sort of education and promptly became a pioneer in it. In providing for higher education by his university, he did not lose sight of the importance of instruction in agriculture and in the use of tools.

PRACTICAL TURN OF MIND

Jefferson was not a light-headed theorist. He usually saw clearly, before he started, the end of everything he undertook. Note how practical he was in what he desired to accomplish by his plan for primary education. He stated his objects thus:

1. "To give to every citizen the information he needs for the transaction of his own business;

2. "To enable him to calculate for himself and to express and preserve his ideas, his contracts, and accounts in writing;

3. "To improve, by reading, his morals and faculties;
4. "To understand his duties to his neighbors and country and to discharge with competence the functions confided to him by either.
5. "To know his rights, to exercise with order and justice those he retains; to choose with discretion the fiduciary of those he delegates; and to notice their conduct with diligence, with candor, and judgment;
6. "And, in general, to observe with intelligence and faithfulness all the social relations under which he shall be placed."

If any state in the Union has a system of primary education that is more beneficial to society than what Jefferson meant this to be, I plead my ignorance of its existence. Dr. Carter believes this statement "ought to be written in letters of gold and hung in every primary school thruout the land and be known by heart to every teacher and student".

OBJECTS OF HIGHER EDUCATION

Turning to the objects Jefferson hoped to accomplish thru higher education, we are amazed at his advanced views. Samuel B. Adams, widely known for his historical research, was within the truth when he declared that "it is safe to say that the relation of universities to good citizenship and to the practical interests of American life has never been better formulated by any professional educator" than by Jefferson. He adds that "American colleges and universities will need to advance a long way before they reach the Jeffersonian idea."

The objects are thus classified:

1. "To form the statesmen, legislators, and judges, on whom public property and individual happiness are so much to depend.
2. "To expound the principles and structure of government; the laws which regulate the intercourse of nations, those formed municipally for our own government, and a sound spirit of legislation, which banishing all unnecessary restraint on individual action shall leave us free to do whatever does not violate the equal rights of another;
3. "To harmonize and promote the interests of agriculture, manufactures, and commerce and by well-informed views of political economy to give a free scope to the public industry;
4. "To develop the reasoning faculties of our youth, enlarge their minds, cultivate their morals, and instill into them the precepts of virtue and order;

5. "To enlighten them with mathematical and physical sciences, which advance the arts, and administer to the health, the subsistence and comforts of human life;

6. "And, generally to form them to habits of reflection and correct action, rendering them examples of virtue to others, and of happiness within themselves."

You know something I do not, if you know of an institution of learning anywhere that is today in its work going beyond what the father of American democracy, a century ago, conceived should be the aim of a university.

JEFFERSON'S HOBBY

Jefferson's educational theory was a hobby with him. He never became so engrossed in other affairs that it ceased to be the apple of his eye. He had no doubt of its being the only sure means of the people becoming the guardians of their own liberty. An educated citizenship he believed to be the only enduring foundation a democracy could have. He emphasized this thought most forcefully thus: "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be."

He recognized of course that in children there are differences in ability and he sought to make it possible for the state to avail itself, thru his plan of education, of those talents of greatest promise, whether found among the rich or the poor.

Nothing Jefferson ever said or favored shows more strikingly his faith in the people for self-government and the necessity for affording them educational advantages, thru public taxation, than his preference for a common school education over a university course, in the event but one of these could be had.

To his friend Cabell, Jefferson wrote on January 23, 1823:

Were it necessary to give up either the primaries or the University, I would rather abandon the last, because it is safer to have a whole people respectably enlightened than a few in a high state of science and the many in ignorance. This last is the most dangerous state in which a nation can be. The nations of Europe are so many proofs of it.

REACTIONARY SPIRIT

Having the faith he did in the people, he was quick to see, following the Revolutionary War, any attempts to weaken their voice in their government. That there was a strong reactionary spirit after the war in favor of government by kings instead of by

the people is an established historic fact. There has never been as much said about the dangerous tendencies of this brief period in the life of our nation as the facts warrant. This period has been referred to by some as "A Suppressed Chapter of American History". In it, so good and wise a man as John Adams said:

All projects of government, formed upon the supposition of continual vigi-
 lance, sagacity, virtue, and firmness of the people, when possessed of the exercise
 of supreme power, are cheats and delusion.

Again Adams declared:

The proposition that the people are the best keepers of their own liberties
 is not true; they are the worst conceivable; they are no keepers at all; they can
 neither judge, act, think, nor will, as a political body.

Sentiments like these spurred Jefferson on to greater efforts in providing means wherewith the people might equip themselves to "act" with wisdom "as a political body".

This lack of confidence in the people and indifference to their enlightenment, so soon after they had thrown off the kingly yoke doubtless moved Jefferson to make the declaration, which he often repeated, that

A system of general instruction which shall reach every description of our citizens, from the richest to the poorest, as it was the earliest, so it will be the latest of all the public concerns in which I shall permit myself to take an interest.

He believed that it was impossible for a people to continue in ignorance and remain free, but he had not a doubt that by and by the master in the schoolroom would displace the man on horseback.

COMING INTO HIS OWN

Jefferson was denied the privilege of seeing the people of his own state adopt fully and whole-heartedly his broad and generous notions of an educational system. He was far ahead of his time and too democratic in his ways to please the man of property who would be called upon to pay in part, thru taxation, the expense of maintaining a system of popular education and who was too shortsighted to see the advantages society would derive therefrom.

But if his own state made the mistake of not promptly falling in with his ideas, that fact did not prevent the great West beyond the mountains and Michigan, Minnesota, Iowa, Illinois, and Indiana, while he was yet living, from adopting his position that "no other sure foundation than education can be devised for the present

vation of freedom and happiness" and from creating a system of local and state taxation to make the proposition good.

But Jefferson is now coming into his own in his native state, if I may so express myself. Educational reports indicate that the common schools of Virginia, since 1870, have made most gratifying progress and that it has been made thru an approach to the Jeffersonian idea. This means that the Virginia educational system and methods have been improved, and the more closely the people of that commonwealth study them the more clearly they understand and the more cheerfully they now endorse the educational views of their great commoner.

His university has long ago become famous thru its achievements. Hamilton W. Mabie says:

It fulfilled Jefferson's noble conception of the place of a university in a democratic society. It was our first real university. It was literally Jefferson's creation. It is the most democratic of American colleges in its organization.

Jefferson was of the opinion, when he was laboring to have this institution established, that in ten or fifteen years it would supply Virginia with all her officers and that they would be highly equipped for their public duties.

It is unquestionably true that no other institution has furnished to the nation as many senators and congressmen from its alumni as has this school. Its voice in national affairs has long been a power. Its methods of teaching are followed very closely in colleges thru the South; and it has been said that a graduate thereof is "a man of exact knowledge and opposed to all shams". A theory that will turn out that sort of a product is to this nation a cloud to guide it on its way by day and a pillar of fire to give it light by night.

THE STATE UNIVERSITY AND ITS SERVICE TO BUSINESS

Evans Woollen was born at Indianapolis on November 28, 1864. He received the bachelor's degree from Yale in 1886 and the master's degree two years later. He is president of the Fletcher Savings and Trust Company, of Indianapolis. During the World War he served as a member of the State Council of Defense and as federal fuel administrator for Indiana.

THE STATE UNIVERSITY AND ITS SERVICE TO BUSINESS

By EVANS WOOLLEN

NOT the least important of our duties is the duty not to talk about things we do not understand, and I have but slight understanding of education. However, I may claim to know something about business, and perhaps this occasion may be regarded as an opportunity similar to that once afforded by the public school authorities in Indianapolis.

They did me the honor of inviting me as a man of business to address their principals in answer to the question: How can the schools best fit their pupils for business? And that gave opportunity to express the conviction that the best thing the schools could do for business would be to leave off the effort to fit their pupils for business; the conviction that if only the schools would fit their pupils for life we men of business better than they could do the rest.

Is there a similar answer to the same question about the state university which is a part of the public school system and as such expected in a measure to set the standards and to be in adjustment with and take over the products of the rest of the system?

The answer by the business man of today cannot be in a spirit of criticism. Rather it must be in a spirit of appreciation of the endeavor by this institution and others to give business what it needs. A difficulty in the way of the endeavor has been that business, especially the kind that is fond of asserting "business is business", has not always known just what it did need. It has not always known that it needed whole men and it has demanded of the state university that which it called practical education. And what shall we now say that business does most need in the youth it takes from the state university? My answer with reference to the university as to the schools is that business, that great field of infinitely varied activity, needs several things more than it needs vocational training. First, of course, it needs character. And then, equally of course, it needs the capacity to think with concentration and precision. Health may well come next, health that brings to the service of business vigor and vitality. If to these is added the habit of work then nothing else much matters.

In saying that business needs character in the youth it takes over I do not think so much of the more simple and obvious things having to do with right and wrong, for they go without the saying, at least without emphasis. Rather and beyond I think especially of generous-mindedness that comes with the habit of accommodation, the habit of trying tolerantly, sympathetically to understand the other man's point of view and to be respectful of his personality. Character in this sense business needs that it may get on in the solution of its problems having to do with human relations. These are the problems that trouble business today and are greatly more important than problems having to do with things.

Now this generous-mindedness is the result, is it not, of the process we speak of rather vaguely as liberating the spirit. We mean, I take it, liberation of the spirit from the little view, emancipation from prejudice against the other man and his cause. The clash in the world today is the clash of unliberated spirits, and business is suffering in that clash.

Here is an illustration. The general manager of a great industrial concern recently expressed an opinion that has support among those whose whole philosophy of life is in the phrase "law and order". The opinion was that for Socialism as for Bolshevism there is, to quote his words, "but one antidote, namely, governmental initiative to protect life and property". Now that business man, vocationally trained but uneducated, honest but unacquainted with the truth, informed but unliberated, knows all about motor cars but little about human relations. He understands well the sacredness of property but perhaps not as well the sacredness of life that produces property. The implication of his words is that force is the answer to any questioning of our capitalistic organization of society. Well, if we had no other answer we should be in a bad way. Government can put out the socialist but it cannot put down Socialism. That is the task of people who think clearly and accept the Golden Rule. Indeed, the answers to all the restless questionings will come not so much from those who know nothing beyond "law and order" as from the generous-minded. The problems that trouble business in these clashing times and frighten the general manager whose business suffers in the clash will be solved by those of liberated spirit and they are those whom business most needs from the state university.

How the state university can best accomplish the process of liberation is not for the business man, but of this I am sure—it is not accomplished when the vocational motive is dominant, when information is the aim and not wisdom, when things of the imagina-

tion are omitted, when acquaintance with the noble of history and fiction is foregone. In a word, it is not accomplished by a curriculum determined with reference to pocket-filling practicality, with reference to the "successful career" of a certain type whereof we have had more than enough. Moreover, the process of liberation does not require the curriculum extended "over the whole field of knowledge" to which President Pritchett recently referred as having enormously diluted college salaries. And in this connection it is interesting to note President Thwing's statement that curriculum extension in the last seventy-five years has been greater than during all the centuries theretofore since Oxford and Cambridge began to receive students. The process we are considering does require that "discipline of the spirit" which Lord Haldane defines in his *Yale Review* article as coming "from the sustained effort to understand and assimilate the teaching of the great masters in literature, science, art, and religion. . . ." He includes science as he must, it being an important part of "the life history of the human spirit and its wonderful adventures", and in a curriculum fit to accomplish the liberation of the spirit there is a place for science as well as for the so-called humanities, but for pure science, for science taught not in application only but philosophically, so taught that the things learned are, quoting from the same article, "not ends in themselves but the milestones which mark progress toward liberation".

And then, next to character, business needs in the youth it takes over from the state university the capacity to think with concentration and precision, capacity for the clear thinking that is helped and proved by clear expression. It needs clear-thinking youth for the long pull more than it needs vocationally trained youth with their temporary advantage. There is no great difficulty for the manager in training to the established ways of the business the boys who have had to quit school. The difficulty is in getting the youth who can think out new ways for the business, whose minds go hither and yon with precision; who, as the saying is, can get their worlds "charted and mapped". They are the youth business wants from the state university. It cannot get them from the correspondence school or the business college. It wants the university to train its youth not so much to do "a certain set of things" as to infuse "the way of doing all things with a certain ideal" of clear-thinking precision. Business, in a word, needs not so much a smattering of facts as the power to coördinate facts; needs not so much the stuffed man as the adaptable; needs not so much him who knows as him who thinks for "the thinker", as it has been said, "takes the old

truth and applies it to the new conditions of the present and of the future".

Here again it is not for the business man to say that this method or that is the best for use by the university in the development of the capacity for clear thinking. It is not for him to appraise the Harvard method of a general examination or any other. Particularly it is not for him to adventure into any defense of the classics when Professor Shorey is on the program, but he cannot forbear quoting this from Gordon Hall Gerould:

The case for the classics and for the older studies in general is simply that they give a boy, if he is properly instructed and is not hampered by congenital ineptitude, a better chance to gain insight and balance of mind than do most of the newer subjects. He is less likely to be near-sighted—astigmatic—in dealing with men and things, because of his experience with minds that have been got into perspective by the focusing of generations of eyes.

The colleges with their athletics and gymnasiums and otherwise have doubtless done much toward the physical development of their students and so toward the reduction of the charge—far greater than the uninformed would surmise—that illness puts on business. They have doubtless done much by way of instruction in hygienic methods of living, much toward the attainment of a public conscience in the matter of health, toward the acceptance of illness rather as a reproach than as a misfortune. For these things, for the healthy minds in healthy bodies that come from the colleges, for the "ordered lives" that come from academic discipline, for the vigor and vitality that strengthen and renew business, for all these things business has reason to be grateful.

And doubtless the state universities are discharging, within their walls and without, their peculiar responsibilities for the conservation of the health, the most important asset of the states by which they are maintained.

But beyond these things I have in mind the query whether something more might be done. The query proceeds from a conviction that the world's workers are lamentably wasteful of their potentialities; that half of them, a third, were all the powers of perfect health evoked, could do the world's work that is being done today. The query is whether the state university might do something more toward an understanding of and respect for man's unbelievable resources in body and mind and spirit; something more toward bringing to service the "unplumbed reservoirs" of strength about which Professor James has written.

The habit of work, it is interesting to note, is the thing Charles M. Schwab, in giving his ideas on college education for business men, is most concerned about. He hates a loafer. On the other hand, I have been told that President Jordan used to say of the university and its students that "It is better to have come and loafed than never to have come at all." Perhaps so, but I am not sure. I am not sure that the loafer gets anything that will compensate him for having acquired or confirmed the habit of loafing. At any rate, whether it is better for him it is worse for the university and, whatever the fact as to a privately endowed institution, one maintained with democracy's funds cannot be hospitable to the loafer. It can accept, should accept, the English requirement that the education it offers be "fit for a gentleman" but, as President Tucker says, "we have added the implication—a gentleman at work". And surely this is important, that the state university in its service to business constrain its youth to acquire the habit, as another has expressed it, of "hitting the line hard in undergraduate years" because the habit "carries on" as in quite other fashion the habit of "hitting it soft" "carries on". The undergraduate days are not "dissociated from what follows" and it is a pity if they are regarded as "an interlude in the serious life", that being the conception of them revealed, we are told, in a questionnaire at Harvard. No, college is the time when our youth should be acquiring the habit of work, of hard work which the world so much needs today, the habit of devotion to what Carlyle, as quoted by President Eliot, says "a man is born to in all epochs—to expend every particle of strength that God Almighty has given him in doing the work he is fit for; to stand up to it to the last breath of life and to do his best". And so I have said that a state university wherein youth are acquiring this habit must not be hospitable to, must not be encumbered by, the loafer who excludes himself from a precious privilege.

On the other hand, the problem of the near-loafer is, I know, difficult as is that of the inept. Notwithstanding their ill effect on the cultural life of the state university, they cannot be excluded and only the intellectually élite retained in an institution which must "foster the sense of solidarity" and "develop the instincts of co-operation" that democracy relies on. It is, I say, a difficult problem, how in the presence of ever-increasing numbers to avoid the overcoming of the exceptional in the mass of mediocrity, how to make "the democratic process yield aristocratic results". But democracy needs the exceptional man and the problem must engage attention, especially if it be true, as Professor Cumings has concluded, that

there has been a distinct deterioration in the quality of the intellectual life of American universities in the last thirty years. A contribution to the solution of the problem may be found in the honors system recently adopted at Columbia. Another may be found in the suggestion made here, namely:

A stiff back-bone of courses of exceptional difficulty correlated into an honor school in which any student may enroll but in which only the student of marked ability and industry may hope to remain, courses broadly planned to arouse intellectual curiosity, to develop the love of truth for truth's sake, free from the taint of practicality and vocationalism, courses to stimulate imagination and develop the philosophical attitude, such courses leading to a distinctive degree.

Whether such a university of quality within the university numbers is practicable I of course cannot judge. But of this I am sure: were it established, I, for one, speaking not at all as idealist but quite hard-headedly as business man would prefer that my helpers bear its degree evidencing the humanities and the pure sciences taught philosophically to the end not of qualification but of quality.

I said "hard-headedly" because I am not here concerned with any plea against materialism but with the needs of business. And in this plea that business, especially the business that must not falter in this troubled day, needs from the state university youth trained non-vocationally in those things that make for the "energizing of body, mind, and soul"—in this plea I would not seem indifferent to vocational training that is a supplement and not a substitute. Particularly I would not seem indifferent to or ungrateful for the university's noble endeavor thruout a state-wide campus to extend its privileges to those who have had to stop their schooling somewhere along the way. Perhaps there is also opportunity for service to business in vocational guidance toward the end of the undergraduate course. It would seem especially in this time of bewildering development that the university might do something by way of aiding its students to get acquainted with opportunities and by way of aiding business to make selections from its students.

We have been considering the needs of business in meeting the problems of an increasingly intricate, farther-reaching, world-wide intercourse and the problems of an under-producing, over-consuming industrial democracy. May I, before concluding, put in parenthesis the query whether the same things are not needed by the political democracy which created and sustains the state university? The success of a state university is of course to be tested by reference to its effectiveness in helping on toward the realization of democracy's ideal. That ideal is not so much that each shall be efficient

in the class to which he is born as that each shall have his chance to move into another class where the outlook is broader and the joy of the spirit is greater. Democracy's method for the realization of this ideal is that for the sake of assuring and enlarging that chance it will forego something of efficiency. It will forego if need be something of autocracy's occupational efficiency and something of aristocracy's governmental efficiency. Democracy cannot, however, forego anything of that education whereof "information is the least part", the education that liberates. Especially in these challenging days of labor's enlarging influence, both political and industrial, and of woman's advancement in suffrage, democracy cannot prudently forego anything of the culture, mental and spiritual, that is the one alembic.

And so to the question, How can the state university best fit its pupils for business? we have found no new thing to bring in answer, have found no suggestion except that any enlargement of the vocational be challenged; that business has plenty of those who have gone to what have been called "bargain sales" in education; that fitness for the business of life is after all what everyone should have for a life of business; that in these days of threatening problems in human relations there is special need of emphasis on the humanizing arts, special need of the fundamentals in the presence of "fads and follies", of short cuts and quackeries.

A state university striving, as I know this one strives, to meet these needs, whatever the response to its request for funds for the "plant", must not be denied its request for abundant funds wherewith to attract and retain the utmost quality in teachers, and thereto every clear-seeing citizen, convinced that public instruction is indeed "the most important item in the budget of the state", will pledge his support in the name of democracy which perishes if it is not educated.

And that pledge comes with all earnestness from one who, grateful for the privilege of participation in this occasion, takes note that for the two objects of his pride and devotion, his Alma Mater and his State University, the same motto speaks for the liberation of the spirit: *Lux et Veritas*.

THE STATE UNIVERSITY AT THE OPENING OF THE TWENTIETH CENTURY

Edward Asahel Birge was born at Troy, New York, on September 7, 1851. He received the A.B. degree at Williams College in 1873, and the A.M. in 1876; the Ph.D. at Harvard, in 1878; the honorary Sc.D. at the Western University of Pennsylvania in 1897; LL.D., Williams, 1903; the University of Wisconsin, 1915; the University of Missouri, 1919. In 1875 he became instructor in natural history at the University of Wisconsin; professor of zoölogy in 1879, which position he held until 1911; dean of the College of Letters and Science, 1891-1918; acting president, 1900-3; president since December, 1918. Among organizations in which he has held offices at various times are the following: Wisconsin Geology and Natural History Survey, director, 1897-1919; president of the commissioners of the survey since 1919; Wisconsin Academy of Sciences, Arts, and Letters, president, 1890-91, 1918-21; American Microscopical Society, president, 1903; American Fisheries Society, president, 1907; American Society of Zoölogists, president of the Central Branch, 1908-9; Phi Beta Kappa, senator since 1904, vice-president of United Chapters, 1913-19, president since 1919; Wisconsin Commissioners of Fisheries, secretary, 1895-1915; Madison Free Library, director, 1890-1909; president, 1893-1909; member of the Wisconsin Board of Forestry Commissioners, 1905-15; of the Wisconsin Conservation Commission, 1908-15. Dr. Birge is a fellow in the American Association for the Advancement of Science, a member of the Washington Academy of Sciences, of the American Society of Naturalists, and of Sigma Xi. He has written many papers on zoölogy and limnology.

THE STATE UNIVERSITY AT THE OPENING OF THE TWENTIETH CENTURY

By EDWARD ASAHEL BIRGE

I HAVE NOT CHOSEN this title without a purpose, for it at once states my subject and limits it. The calendar shows us that one-fifth of the twentieth century has passed, but we need only glance at the political and social world to be convinced that we have barely entered upon it. In this respect our century is in no wise exceptional, altho it might not be easy to find one in which calendar and fact were so far out of step as they are today; for the world has devoted the earlier years of recent centuries to working out the problems of the past, and it has entered definitely on those of the present only after some delay.

I suppose that the treaty of Paris in 1815 may be said to date the change from the eighteenth century to the nineteenth, in the same sense that the armistice of 1918 marks the close of the nineteenth century. In both cases years were to pass after the calendar had registered the advent of a new act before the curtain was rung down on the last scene of the old one and the stage set for the new play.

In the same way we may date the eighteenth century as a new one from the death of Queen Anne and of Louis XIV. Its predecessor may be said to have opened more promptly with the accession of the Stuart dynasty; while the sixteenth century is almost in accord with the twentieth for it may take its opening date from 1517, from the nailing of Luther's theses to the door of the church at Wittenberg or from the election of the Emperor Charles V two years later.

We need not press the point farther, for in any case there will be no dispute as to the present. There is no need of words to tell us that we at least find ourselves in the day of change from the old to the new, and whatever may be said of the world at large, we of the state universities may be sure that the armistice of 1918 marks the turning of a new page in our history. We can already see that the preceding half-century or more was the period of the development of conscious relations between the state university and the state. The coming decades are to witness the evolution of universities thus related to their respective communities.

The state universities from the first saw that it was their duty to apply learning to the amelioration of life; but the Morrill Act of 1862 first made possible definite and active connections between the public life of the state and the intellectual life of the university. Nor were these connections at once strong. For the economic life of communities and states which were still in the pioneer stage or just passing out of it depended rather on exploitation than on cultivation; and the simple social problems of a pioneer population, sparse and largely transient, did not call for the administrative aid of experts.

But as the balance of exploitable natural resources decreased, as population became denser, as administrative and social problems increased in number and in difficulty, there arose a growing consciousness of the intimate connection between the life of the state and of the university. This was not confined merely to those relations of practical assistance, which my words indicate, but it extended to all intellectual relations. The state university, as years have passed, has become not so much a state institution, not so much a representative of the state, as the state itself organized for the maintenance and development of the intellectual life of the people.

In the university the modern state has resumed one, and that the chief, of its older and higher functions. It recognizes no longer as a matter of theory but in practical form the truth that the state as well as the individual has a spiritual life which must find full expression. It looks to the university for whatever aid knowledge can give in solving the scientific problems of agriculture, the economic problems of industry, and the social problems of government. But it looks for more than this. It turns toward the state university as pre-eminently the organization in which the life and aspirations of its people express themselves, which gives opportunity to youth from all classes of its people, not merely aiding those who need help but attracting those who seek expression of their mental powers.

Thus the state university, standing at the head of the public schools, has come to express the higher life of the people in a sense that no other institution expresses it. Out of that relation, felt equally by university and by state, there has developed a new consciousness on both sides. On the side of the state there has arisen a sense of possession—a feeling of pride in an institution which gives visible expression to that which is best in the state. On the side of the university there has developed not only a new and higher sense of duty toward the state but also on its part a new

sense of pride in its position as embodying and as inspiring the higher life of a great people.

This conscious relation between state and university is immensely stronger today than ever before. Nation and state have alike emerged from the war with a keener sense of their personality. Nationality has become a vital force in a new sense, and with this change the personality of the state also has gained a similar expansion. It is with a new sense of that personality that the citizen now looks toward his university—toward the institution to which all the ways of education converge, in which the intellectual strivings of the people become articulate, in which their aspirations toward a higher life may be clarified, guided, and brought to fulfilment. Nor is this all. Not only does the state university offer to its citizens the path of opportunity, the way thru which they may enter a larger life of thought and of freedom; it is also the source from which must radiate influences that touch the general life in all its parts, from which the citizens and their organizations of all kinds may derive constant inspiration and counsel.

Thus the people turn to us today with a heightened consciousness of the personality of the state as embodied in the university, with a new sense of their own necessities, and with a quickened confidence in the duty and the capacity of the university to meet these needs; and, let me add, with a new readiness to criticize and condemn failure in meeting them.

At such a time it is both easy and difficult to speak of the future, equally easy and difficult to speak of the present in the case of universities, whose present is but a bit of the future. Easy—because in a time of confused issues “any guess goes” for the day and is forgotten tomorrow; difficult for those on whom rest even in small part the responsibilities of that tomorrow and whose guess must in some sense forecast action if not policy. Perhaps I should rather use the word *impossible* than *difficult*, for the new century’s base line of experience which we would prolong into the future is one not measured by years but rather by weeks.

Yet in spite of these severe limitations I shall venture to speak of the present problems of the state university—I shall speak of them as the past year has forced them upon us—only partly formulated, quite without final solution, often without even partial solution. I shall consider them under three heads, the problem of numbers, the problem of standards, the problem of progress.

No educational fact of the present year is so striking as the enormous increase in the registration of university students. Not

at one or two exceptional institutions, but everywhere classrooms are overcrowded, laboratories are inadequate, teachers are pitifully too few, even living facilities are grossly overtaxed. Is this situation, arising this year for the first time, merely temporary? Is it the result of the release of youth from war duties and will next fall see the tide of college registration begin to fall?

There is but one answer to these questions. Perhaps there will be no great additional rise next fall in the registration of students. But do not all of us know that the unprecedented numbers of 1919 may be capped by another unprecedented increase in 1920? Can any of us find warrant for a belief that the number of our students will decline next fall? Can any of us even nurse the expectation that our numbers will not continue to rise during the next decade in much the same way as in the past? For myself, at least, I see no such prospect before us. The attendance of regular college students at the University of Wisconsin has practically doubled during every decade of the past half-century. The only chance that the coming decade will not repeat the story of the past lies in the word *practically*. For it is certain that some part of this year's attendance is abnormal, and we may perhaps cherish for a time the belief that the normal attendance for 1919 might have been only 90 per cent or even 80 per cent above that of 1909, instead of 100 per cent which it really was, and which every preceding decade has shown. Yet these possible figures give but weak guidance to an administrator who feels the growing pressure of youth toward college—a pressure due not so much to the spontaneous intellectual ambition of individuals as to the public and semi-public necessities of society, of manufactures, and of trade.

University attendance has passed into a new era—is on a new basis. The actual registration will fluctuate as in the past—the resultant of numerous social and economic forces. But the balance of these forces is and must be toward increase; they will be checked or accelerated from year to year, as the case may be, but as seen for any series of years they must move forward with the assured progress of all natural forces.

I need not press today on that most acutely painful spot in the administrative anatomy—the increased cost of operating a university. Our cheerful friends, the economists and their statisticians, have for a year or more been predicting a reduction of costs in the immediate future, and no doubt if they keep on long enough their prophecies will meet partial fulfilment. But no one is so bold as to hazard the guess that prices will return to a level even approx-

imating that of 1914 during any period which is worth considering, unless the human lifetime is to be prolonged to the age of Methuselah. Universities therefore cannot escape the practical certainty that they must educate students in numbers which only five years ago would have been thought impossible and at a cost per capita whose prediction five years ago would have raised doubts as to the sanity of the prophet.

Nor does this reference to operating costs tell the whole story. Both buildings and equipment are wholly inadequate to present demands, to say nothing of those which the immediate future will surely bring. I question whether anyone who forecasts the capital needs of his university can fail to see that the cost of these necessities alone much exceeds the total expenditures of the past.

Here are major problems for us of the state universities, and problems for which there is no general solution. Like most of our social problems, they will have to be worked out as we go along. Nor can any financial solution which might be proposed today be regarded as more than temporary. For no one can suppose that any of the enormous additions to capital recently secured by our endowed universities will yield an income that will long suffice for their needs. Nor will any increase of income which legislatures may give to state universities be long adequate to the situation. In 1911 the University of Wisconsin received from the state an increase of the mill tax from two-sevenths to three-eighths of a mill. This sum has for nine years constituted the annual contribution of the state to the educational expenses of the university as an institution of research and of teaching at Madison. No one can today look into the future with the expectation or even the hope that this source of income can now be fixed at any rate which will continue to support the university during a correspondingly long period.

Under such conditions there is little use in discussing financial problems. We must meet them as they arise and as best we can. And it is well that they must be so met; for seen in the mass they are staggering in their proportions; they seem impossible of solution. Fortunately they will not have to be solved in the mass. They will come perhaps not singly, but at any rate in such number and force that they will be disposed of *somehow*. But all the same no member of a state university, harassed by a quick succession of insistent problems, is likely to escape many practical sermons on the text "Sufficient unto the day is the evil thereof."

The difficulties of the universities due to greater numbers and increased costs are not so completely the product of the war as

their sudden appearance might seem to imply. The problem of rising costs is no new one, tho greatly enhanced by the war, and the problem of numbers is the outcome of the slow establishment of the conscious relation between state and university. But, after all, their rise to a position of major problems has been dramatically sudden, and both university and state must seriously consider their relation to each other as affected by this new importance.

The people of the state regard the university as an institution of higher learning, of research, of all that historically goes with the name university. They see also in the university the path of opportunity for the youth of the state, along which both they and the state as a whole may move toward life on a higher level. Both of these purposes are fully included within the duties of a state university; only as it meets them both does it justify its name.

But as the state moves forward, as it leaves the simple conditions of its youth, it leaves also many of those easy conditions of life which go with a sparse population and large exploitable resources. The overcrowded university is witness to this fact. Modern necessities demand that native wit be supplemented with far more serious training than any earlier generation needed. Competition is selecting for success the youth who are willing to undertake and carry thru the labor of long preparation. It is this demand of necessity, this pressure of competition, which today urges students to college by the thousand, when intellectual ambition drew their fathers thither by the hundred or the score.

The public must face the fact that the same forces which now refuse success on the easier terms of the past, which are urging youth into college as a condition of success, will continue their work of selection; and the importance of this truth is emphasized today by our overcrowded halls and by our larger costs.

For the privilege of university education, endowed and supported by the state, has been too lightly regarded by quite too many of its citizens. Too many have been lacking in appreciation of the value and greatness of the opportunities which the state is offering. Still more often has there been wanting a sense of the duty of the student to prepare himself adequately to profit by the privileges offered by the state.

The ways into the university must be broad and direct, and the terms of admission must be administered not in a narrow or exclusive spirit but in that of friendly help. But the question is a fair one—and the state must meet it rather than the university: Ought the state to provide an education so expensive as university training

is now and will be in the future for students who have not had the definite purpose and plan to make the best use of opportunities so great and so costly?

Let me illustrate something of that matter-of-course attitude of many students, this half indifferent assumption by them and their parents that a university education is a thing which needs no direct and specific cōoperation on their part. I desired some months ago to know as soon and as accurately as might be the possible number of students who next September are to come from the high schools of Wisconsin to our university. I was told by those who know the schools that there was no use in attempting such an inquiry so early as March; for at that date, they said, a very large share of the students would not have decided on their plans for the autumn. Certain groups of students indeed would have made their plans and would be far advanced in the process of preparing to carry them out. Students who are looking forward to an engineering education would have been definitely working toward this end for at least a year, more probably for two or three years. Great numbers of students who expect to enter other courses would be in the same condition. But there would remain also great numbers of students who are still without definite plans, who go on to the end of the high school course without forecasting the future, still less working for it and so adjusting their studies as to make the coming years as profitable as possible. Out of this number come that not negligible group of freshmen who enter college without definite aim and who for the most part remain there but a short time. Out of this group come also some who, after dawdling thru high school, receive the stimulus of a serious education after they enter the university; and this fact we are glad to recognize. If the cost of higher education to the state were a negligible quantity, this opportunity might well be freely continued. But when the university becomes a chief item in the state's budget—when the cost of teaching the individual student is rising so rapidly and to such a level, is it not fair that the state should demand a serious purpose of those who would enjoy the privilege thus afforded, a purpose evinced by serious work during the high school course, definitely directed so as to make the student ready for university study?

I am not raising at all the old questions of preparatory courses and of studies which best fit for the university. I have always been most ready to recognize the high schools as the "people's colleges" and to take into the university students with the most varied kind of preparatory study. But experience has shown all of us that the

student ordinarily continues to do in the university work of much the same grade as that which he has done in high school. In the great majority of cases those whose high school grades are low find themselves—or in a much smaller number of cases are found—to be unfitted for university study and retire from it or are retired as the case may be. This process is a wasteful one, both of time and of money. It is even more wasteful of the time and money of those who are prepared to profit by university work but are held back in their progress by their limping comrades. So long as numbers were small and universities were simply organized institutions, the waste could be permitted. It could even be encouraged on the theory that those few students in this group who made good in the end were a sufficient recompense for the labor of the teacher and the cost to the state.

Does this situation still continue? We face the problems not only of great sums for operation but of millions of dollars for buildings and equipment. Is it not our duty to put squarely before the state the question—Ought not the privileges of the university to be limited to those whose records of earnestness and of success in high school study show that they are prepared to profit by them—who give fair hope of making a return to the state for the great sums which the taxpayers are contributing to them?

Whatever the answer to this question, we still face the problem of giving an expensive higher education to thousands of students in every state here in the Central West. We of the universities stand ready to teach all youth whom the state may send to us, on the present terms, if the state will provide buildings, equipment, and teachers. We freely recognize the advantages of the policies of the past. But we are sure that the state is now confronted with a new situation in the rapid growth of our numbers and the equally rapid rise of our costs. Under such conditions, must not the sorting process which education is always making be applied more vigorously before the student comes to college instead of being delayed until after he enters the university? I would not be misunderstood as to the possible effect of such a change of policy. It would not diminish the number of our students. It might check the rate of increase and allow us to consider other problems than those of elementary courses, and even in some measure to meet them. It would also—and this is far more important—allow a grade and amount of work in the first year of college that would add greatly to the intellectual return which the state receives from its investment in the university.

The problem of standards is like the problem of numbers, an outgrowth of the discovery of college by the public a generation ago—and a problem whose insistence has been greatly emphasized by the experiences of the country in the war. It is also a problem which is set differently for the state universities and for the endowed institutions, and in this respect also it resembles the question of numbers.

I am not concerned here with the pedagogical questions of academic standards; those belong rather to a conference of teachers than to the present occasion. I am looking at the larger question of the content of the courses of study which the universities shall offer. A generation ago this question did not exist; for whatever might be the type of the four-year course of study, no one doubted that its general aim was rather to graduate youth with a grasp of fundamental principles than to provide them with equipment for practical life. The latter service was left to the post-collegiate training of the larger world. But gradually the public discovered that college training could be of service in many ways more directly associated with the outer world than was the older type of college. Direct and professional training was required in increasing amount of all who would teach. Business in its larger forms discovered that much besides a "general education" could be gained in college. Agriculture found that specific courses of study in farming were valuable as well as the study of chemistry of soils and of nutrition. A host of new lines of employment has recently developed—social work in cities and in large manufacturing concerns, secretarial and administrative and technical positions of all kinds—and all of them look toward the college and especially toward the university to lend direct aid in preparing students for an endless variety of service to the public.

This situation has been growing steadily and, as we of the universities thought, very rapidly in the decade or two preceding the war. But the war has given it an impulse which makes its earlier manifestations seem both insignificant and slow. The war on the one hand inevitably placed an enormous pressure on instant readiness for accomplishing needed results, and on the other hand it demonstrated to the public in the most dramatic fashion the unrecognized truth that many capacities of men which it thought were gifts of nature were really the products of training. Hence has arisen a demand for training far more specific than universities have ever given and enormously more extended in range and variety. The general college course is seemingly threatened with

extinction amid the rivalries of technical, semi-technical, and vocational courses.

There are two matters of interest somewhat to one side of the main line of my thought which I introduce here. The first is that while the general university courses have been made more specific and professional, the professional courses of law and medicine have been rapidly turning their attention from practical matters to the fundamental principles which underlie their respective professions. The graduate of the law school is no longer told that at graduation he is ready to "hang out his shingle and wait for clients". The diploma of M.D. must now be supplemented by hospital experience before the young doctor believes himself ready to treat patients. This change is the result of the same forces that are modifying college courses in the opposite direction, the demand for more adequate preparation for the work of life. This means the introduction of specific training where it has not previously existed and the ousting of specific training where it once existed by the demand for a wider grasp of principles.

The second point is that our troubles come from the apparent necessity of fitting our studies within the frame of the four-year course. We are not free to lengthen our courses of study in the face of a reasonable demand that youth shall be prepared as promptly as possible for the active duties of life. It is now difficult for a physician to start independent practice much before the age of thirty, and more than murmurs are heard of opposition to a system of education which so long delays entrance upon active life. And even if there were no such criticism, we should hesitate to ask our students who are seeking aid in most of these new directions to give to study a longer time than four years after the secondary school. In most cases the traffic will not bear a higher tariff for the rewards of these professions and semi-professions are not great. They are mostly positions with relatively small salaries or occupations with very moderate financial returns. Thus the easy solution of maintaining the old course and adding another year or two of professional study is not at present open to us.

Nor can the state universities at least refuse the call for aid which comes from society. One main function of a state university is to apply learning to the amelioration of the life of the state which it represents, and that in no merely remote and indirect fashion. The responsibility for the advance of the common life of the state rests upon its university in a fashion which must be welcomed today as it always has been in the past. We cannot

therefore escape these new conditions by asserting the policy that we will teach only principles, and that practical applications must be sought in graduate courses and in the teachings of life outside of college. We have in a hundred directions assumed the leadership of our respective communities in matters which intimately concern practical affairs. Experience has shown us that such leadership is not a function to be assumed for a time and then dropped or turned over to other agencies. We find that progress in a state depends on the constant help of men of power in central positions; that those who at the first preached the gospel of economic and social progress to the people and who secured a hearing and acceptance for it cannot turn over to others their function. They are no less needed to guide the later movement and to find out still other workable possibilities of betterment.

The new century seems to bring us face to face with another group of problems as fundamental and apparently as insoluble as those presented by numbers and by budgets. On the one hand, we cannot ignore the challenge of the new world which is so rapidly developing around us. On the other hand, how shall we incorporate the vocational studies called for by those new demands without losing from our courses that which has given them their permanent value in the lives of our graduates?

For those who constantly press upon us specific studies as preparation for specific functions in business and society forget too often that the permanent value of a university education rests not in the immediate economic value to the young graduate but in the grasp of fundamental ideas and principles which it has given to him and which he will be able to apply in countless ways unsuspected when he leaves college. It is easy for higher education to degenerate into rule-of-thumb instruction, and no instruction is so available for the present or so worthless in the long run as is that of "immediate practical value".

And this demand for specialization is by no means confined to representatives of the extra-university world who ask direct and specific help. The call is perhaps quite as insistent within university walls. Who of us has held an administrative position for even a few years without being told—for instance—that an elementary freshman course in history must be different for intending teachers from that for others? Who has not heard the same statement regarding necessity of similar differentiated courses in history for future students of law, of political economy, and of business?

The same need of specialized elementary courses is urged upon us in the case of practically every freshman study—physics, chemistry, foreign language, English—the university is asked to adjust all of its lines of teaching from the first to specific future needs of the student. Neither in nor out of the college is it easy to find the presumption that the student who has a good elementary knowledge of a subject can apply that knowledge in many various practical directions of later study. It does not seem to be presumed that the student as he passes from history to economics may be able to review his knowledge from the new standpoint which additional study brings. Still less is it assumed that this power is a normal part of a higher education.

Thus the university administrator finds in this relation a complex of problems for which no general solution can even be stated, much less advocated. He finds a conflict of duties—of duty toward the fundamental purpose of a university, that of transmitting to the new generation the results and achievements of human life for its guidance and inspiration, and of duty toward an equally fundamental function, that of presenting these results so as to better the social life not only in general ways but in specific directions. The continuity of human thought and experience depends in great measure on the fidelity of universities to the first function and the vigor with which they execute it. The permanence of human progress depends also on the maintenance of this continuity. The university cannot forget this and still remain a university. It is equally impossible for the state university to divest herself of the duty of leadership in the new world and of guidance in specific directions.

How combine the old and the new in the all too narrow frame of a four-year course? The problem, so far as it is soluble at present, reduces itself to one of time, and thus comes back to the same point at which we left the problems involved in numbers and costs. Our school system as a whole must accept the duty which the times put upon us of bring forward our youth more rapidly, so that at the age of eighteen or of twenty-two they may be at least a year or even two years in advance of their present attainments.

But such a movement is by no means a simple or easy one, for it involves fundamental changes in our school system and changes which we at least who are older are very reluctant to contemplate and which we can adopt only under the compulsion of social necessity. Our school system has been open to all on substantially the same terms, and the student has been free to postpone from year to year his decision on the most important matters of his educational

future. Even six months in advance is too long a time for him. We may criticize the excessive manifestations of this privilege but we cannot fail to recognize its possibilities for a democracy or to regret any necessity of limiting it; and the same statement applies even more to the situation as regards the content of courses of study. For parallel with the growth of high school has come a rise of age when youth enter into industries. The school systems of our cities contain thousands of students who are at an age far above that of their parents when they in their day exchanged the lessons of school for the teaching of active experience. Many of these students are past the stage where they are really profiting by that study of books which is necessary for the youth who is to go on with college work. The inevitable result is a slowing of the pace of the high school, a relaxation of its requirements so that it may suit the needs of students who feel themselves nearing the end of study and are rather looking to find a few months of relative ease before undertaking the strenuous activities of business than to acquiring all possible learning in the few remaining weeks of school. If the standards are raised, if the pace is quickened, as it ought to be for the youth who is going to college, standards will be too high and pace too rapid for many of those who are nearing the close of their schooling. Yet this common life and common schooling of the youth of a community have meant much for democracy which we must not lose. It is no small thing to carry along the youth of a whole city together in a common system of instruction until they have reached the age of sixteen to eighteen years. There is a distinct gain in a system which permits postponement of decision as to future career to as late a date as possible, which gives to every ambitious youth a chance of a common education, which keeps open for them all the paths of intellectual progress and which does not shunt them into the by-paths and blind alleys of education. There is a great gain for an educated democracy in a system which does not attempt early specialization, which, on the contrary, is definitely concerned to postpone it. Yet the inexorable march of events is demanding changes in this as well as in many other aspects of democracy. We older people are being forced to learn that much which we thought characteristic of democracy is really the fortunate product of a new country. We, with all the people, are being forced—however reluctantly—to solve the problem of a democracy in a time of change, for a crowded population, for highly organized competitive states and nations.

And foremost among the problems which we must solve is that of time in education. How can we turn out our youth at the age of twenty or twenty-two, better prepared for active life than now, and at the same time educated, not merely vocationalized? The education of a merchant, a manufacturer,—what you will—is one thing, and a very important one; but the liberal education, the training for a free man in a free state is still more necessary, not only to democracy but also to our civilization. And while we must do much vocational training, do it largely and sympathetically, we must not leave the other undone, or only half done.

If the preceding conclusions of this paper are correct, the state universities are entering upon a period in which the available resources of the state will be taxed to meet the increasing cost occasioned by the increased number of students, the decreased purchasing power of money, and the necessity of expansion and diversification in instruction. Yet the problems of the future are by no means exhausted by this statement. We have hitherto regarded university education as remaining on the plane which it has reached. It is the function of the state university to bring its people up to the level which that education indicates. But for our states this result is far from adequate. All of these north central states are now fully out of the pioneer period; they have passed or are passing out of the purely agricultural stage. All are still primarily agricultural but all are developing great manufactures and with them large communities. All of the problems of developing towns, of great cities, of a dense population, are before us. These include not only new lines of study on the old plane, but they demand the advance of university education, the introduction of studies not of immediate practical value but which will influence the life of the future and which cannot be extemporized as the need for them arises.

Let me illustrate my point. Does any representative of the older states here present doubt the great advantage to his state if its university had maintained for the past generation a department of art? I do not mean a lectureship or a professorship, but a department comparable in strength and in cost to the departments of chemistry or geology. Consider the result on city planning in the scores of smaller towns that have grown into cities or are now entering that stage, if their citizens had been accustomed to look to the university for guidance in such matters as they look in questions of engineering or of school administration. What would have been the effect on the thousands of students who are now leading citizens in their communities, if they had

been conscious thruout their course of an art influence in the university comparable in power to the scientific influence which has been present? Our states are now rapidly acquiring wealth which should express itself in beauty, which desires such expression and which will find it in a way, but for which no central guidance is present as it is present for that part of wealth which is spent, let us say, for roads, for sewers, or for the relief of disease and want. If we look forward for twenty-five years and foresee the cities and towns of the future, how imperative will be their needs of this kind, how civilizing such an influence upon this increasing wealth! Yet was there in the past any time when we could have expected our legislatures—with all their appreciation of learning and with all their generosity toward it—when we could have expected them to provide thus largely for art in its various forms in addition to their provision for the standard departments of a university? And what of the future? Can we expect the public at large to forecast the somewhat remote future so clearly, to provide for it so liberally, besides providing in a similar way for the present and for the years close at hand whose needs are plainly visible? And what of the present? Do we see that even the most large-minded legislature will provide for our enormously increased programs and to this provision add also large means for these seemingly remote needs?

I believe that in this direction lies the specific duty of the alumni of state universities. There has always been a difference between our alumni and those of the endowed institutions. Our alumni have regarded the university as holding the same relation to the state that the high school holds to the city. It offers privileges to the public freely and asks of the individual only that assistance which comes from public-spirited citizens. This attitude had much to justify itself in the past. When universities were small institutions, offering mainly standardized courses to relatively few students, there was no need of other assistance. Nor ought the state university now to seek aid except from the public in providing adequate salaries for its teachers, adequate classrooms and laboratories, and the necessary enlargement of the standard work of a university. But as these items of cost increase, so that the university becomes perhaps by far the most expensive single part of the state government, a new condition is created. Still more is the situation changed when we can clearly foresee the present need for much that will be available for practical life only after the lapse of years. If the university system is to be raised to a higher plane in

such matters, it must be by the aid of those who have already profited by it and can therefore appreciate future needs better than others who have not had their good fortune.

This duty rests immediately on our alumni—on those whom the state has raised to the level of the standard university of their own day, on those who have received at the hands of the state the elements of the intellectual life and with them the gift of appreciating the higher needs not only of themselves but of the people.

The states have been quick to appreciate and ready to provide for university education on the standard level. But it will never be easy, it will often be impossible, to obtain from the public the large means necessary to raise at once the level of university education, to introduce in strength and in vigor those influences in university life from which we may not expect immediate returns but which in the long run are of enormous value to the state.

I use the word *introduce* intentionally. For these advances in education will soon come to be part of the standard course, accepted and supported by the state. However largely they may be endowed, they will outgrow their endowment and the state will carry them on in their larger life. And when this happens to one line of advanced work, our alumni should be busied with others equally necessary and equally difficult to reach at once in the strength needed by the state.

For art is only one of the many directions in which the level of the university course must be raised. There are also needed opportunities for research enlarged wholly beyond even the hopes of those of us who administer universities. The state is already providing generously, tho all too inadequately, for those lines of research in which science is trying to solve the practical problems of life. It is granting to all teachers the facilities and the time necessary to keep their teaching fresh and vital. But none of us yet sees, except in a vague and general way, how close is the connection between higher research and public prosperity. Even less adequately do we realize how necessary to the continued life of the commonwealth is the spirit of research among the people, how vital the importance of seeking out and cultivating along every line that rarest of all intellectual qualities, the capacity for productive research, not alone that which advances knowledge along paths already marked out, but that which finds new ways into the world of the unknown.

All of our states provide in some degree for this kind of research and some of them make a liberal provision for it. But does any

of them appreciate its necessity, its cost, or the long chances of success, the long time for its fruition in the common life? There is but one answer and that the one which we must expect. For the position of our people today in regard to research of this kind and on this scale is what it was a generation ago in regard to art. They were then just emerging from the pioneer stage; they had reached the condition of achieved comfort, but they did not and could not visualize a future—tho it was only a few years ahead—when there would be imperative need of providing conditions of life, public and private, adequate in beauty as well as in comfort.

So of this higher research today. Our people see the need of studies in agriculture, in engineering, in sociology. But they do not see how these investigations are made possible today by the obscure labors in the last generation of organic chemists, of mathematicians and physicists, of statisticians and philosophers. Still less do they see that the applied research of the next generation—enormously enlarged in its range and amount—will be fruitless unless it can have behind it a similarly increased volume and weight of pure research, directed toward all sorts of ends, even toward those which today seem most unlikely to yield practical results. Still less do they see that the youth who are capable of research are, in the highest sense, the growing points of the public life—the buds out of which are to come the branches that shall bear blossoms and fruit for another generation. Can we expect that the larger public will so forecast the future, so visualize the present conditions of its still unknown successes and failures as to make large financial sacrifices for that future?

But our alumni, those to whom the state has given the best of its opportunities, those whom the state has led along the paths of education from childhood on, until they have reached the limit of the knowledge of their day, until they have attained a position from which they can see over into the future and forecast its needs—ought not their Alma Mater to be able to turn to them in confident expectation that they will fully appreciate these needs and will so act that each coming generation will reach a higher level than its predecessor?

If they accept this duty, they will not be left to themselves. The public is somewhat slow to respond to the plea of university authorities for these higher things. Theirs is a plea *pro domo sua* and is subject to the deductions which such a plea always receives. But when that great confraternity of alumni in every city and village of the state, in office and shop and farm, is everywhere

animated by the determination to raise the intellectual level of university life and is ready to make personal sacrifices for that end, then the larger public will be not only willing but eager to take a full share in maintaining and increasing a work so beneficent.

I do not know whether you have gathered more courage than perplexity from this summary recital of our problems. All those might reasonably be perplexed who feel it necessary to forecast exactly the conditions of the future, to foresee future needs and the means of meeting them. None of us today can know how we are to be equal to the demands of the coming days, whether financial, scholastic, or educational. Yet we may be sure that these demands will be met as the coming days present them in concrete form. For they are the problems of strength, not of weakness; the difficulties of youth and manhood, not of infancy or senility. They arise not from past failures but from past success. The university and the state are today united far more closely than was even foreshadowed in our hopes a generation ago. It is out of that accomplished union of purposes and of life that our difficulties spring. They are the material difficulties of a work and an influence enlarging more rapidly than the resources provided for them. They are the scholastic troubles of an education which has enlarged more rapidly than it has solidified, and which is still urged forward by necessity. They are above all the troubles of those to whom present success reveals the imperative need in coming days for higher achievements than are permitted by the resources of the present.

Surely we may "thank God and take courage" as we face these problems. We shall not be satisfied with our solutions. They will undoubtedly be quite as inadequate for the large questions of present and future as were our solutions of the smaller questions of the past. We shall find no easy or straightforward path of progress. We shall make many mistakes; we shall meet many reverses, many disappointments. But thru all of them the powers of the state university will develop, her usefulness will grow, and her life—united with that of the state—will be enlarged. That common life will become clearer and richer and stronger until in state and university alike the visions of youth shall be fulfilled and the dreams of age shall come true.

THE FUNCTIONS OF THE STATE UNIVERSITY

Paul Shorey was born at Davenport, Iowa, on August 3, 1857. He was educated at Harvard University (A.B., 1878), University of Leipzig, University of Bonn, American School of Classical Studies in Athens, University of Munich (Ph.D., 1884). He has received the following honorary degrees: LL.D., Iowa College, 1905; University of Missouri, 1913; Johns Hopkins University, 1915; University of Michigan, 1915; University of Colorado, 1917; Litt.D., University of Wisconsin, 1911; Brown University, 1914; Princeton University, 1920. He was admitted to the Chicago bar in 1880. From 1885 to 1892 he was professor of Greek in Bryn Mawr College, since 1892 in the University of Chicago. He has been head of the Greek department since 1896. In 1901-2 he was director of the American School of Classical Studies in Athens; Turnbull lecturer in poetry, Johns Hopkins University, 1912; Roosevelt professor at the University of Berlin in 1913-14; editor of *Classical Philology* since 1908; president of the American Philological Association, 1910; member of the National Institute of Arts and Letters; member of the American Academy of Arts and Letters. Among his published works are *De Platonis Idearum Doctrina*, *The Idea of Good in Plato's Republic*; *The Odes and Epodes of Horace*; *The Unity of Plato's Thought*; *The Assault on Humanism*.

THE FUNCTIONS OF THE STATE UNIVERSITY

By PAUL SHOREY

THE DECISION^{THE} of the Civil War and the general drift of our development towards unity and centralization tempt us to do something less than justice to the contribution of our state governments to American prosperity. In spite of the homogeneity of our people, the unity of language, literature, and law, and the leveling of differences by the railway and the telegraph, the importance of the states for American life is greater than we realize. We lightly say that ours is the first successful federal government on a large scale. But we take for granted the blessings that this system has brought us and rarely reflect upon the unique combination of flexibility with stability that our state governments secure for the national life. It would be a much more profitable line of reflection than the ingenious and unsettling historical science which teaches that the Constitution of the United States is an eighteenth-century strait-jacket imposed upon our natural growth and progress by designing plutocrats. Under normal conditions we are sometimes a little neglectful of our state governments and console ourselves for the mediocrity of the *personnel* that sometimes results from this carelessness by celebrating the superior dignity and authority of Uncle Sam. Impatient reformers sometimes seek to extend the authority of the central government to the regulation of our entire lives and the wiping out of all anomalies in the legislation of forty-eight states.

Any and every revolution, they perceive, could then be easily effected by simply seizing the helm at Washington. In the face of such designs it is a comforting reflection that a complete collapse of the central government would not give the American people over to anarchy. Many of our forty-eight states are indeed almost what the orators style them, self-contained empires. Not a few of them could feed themselves and many of them in combination with neighboring states could, if put to it, provide all the essentials of a tolerable existence.

But I am not now thinking of these material considerations—of the fact that New York surpasses a Belgium, a Holland, or a Denmark in population and wealth or that famous historic states of

Europe could be lost in Texas or California. I have in mind the fact so familiar that we fail to appreciate its significance that every one of these forty-eight states possesses an established government with developed legislative, executive, judicial, military, and tax collecting organs, and within a month could add to these the functions of coinage, diplomacy, and the post-office, convert its militia into an embryo army, and stand forth to the world a complete nation, far more stable in its traditions and politically educated in its citizenship than half of the nations with which the wars of the past century have checkered and Balkanized the map of Europe. A conference of a dozen governors could organize a group of such states into a league over which neither anarchy at the center nor invasion at the circumference could easily prevail. Such in the last resort and from the point of view of political stability and the balance of power are some of the potentialities of the system of state governments that we take so lightly and sometimes so humorously.

But it has another significance the consideration of which is more appropriate for this occasion. The states are, as it were, sociological laboratories for the trying of experiments which might be hazardous and revolutionary if attempted on a national scale. In this way, valuable or specious ideas in finance, banking, taxation, prison administration and reform, charity, and the machinery of elections may be tested by single states, allowing the nation as a whole to live by the ancient maxim, Prove all things, hold fast that which is good. Among the greatest of the subjects thus left to the states is education. There is nothing in the Constitution to prevent concurrent action by the national government. Washington and many since conceived of a national university to complete and crown the systems of local education. And it may be that in the future the national government will be more active than in the past in coördination and direction, and in the equalizing of opportunities. But, in the main, American education hitherto from the kindergarten to the university has been a function of the state by the authority of which all higher degrees are conferred. In the actual order of development, however, state schools and colleges came later than the local, endowed private, and denominational institutions, altho historians of state universities are accustomed to point out that state initiative, assistance, and control played no slight part in the foundation and early history of Harvard, Yale, Princeton, and other of the nine chief Colonial colleges of the original states. But whatever the history of the idea, state universities in common

parlance means the institutions so designated of the southern and western states. And especially those now thirty in number that by organizing themselves in 1895 as The Association of State Universities recognized that for the present they constitute in some sense a distinct species from the older and larger endowed universities on the one hand and the small colleges, largely of denominational origin, on the other.

The rivalry of the state universities with the older endowed institutions has always been a generous one. In the infancy of the state universities their faculties were largely recruited from the older institutions, and as they developed professors passed to and fro from the one group to the other with no deep sense of difference. And now that the final predominance of the state university is assured, none but the few fanatics of democracy and secularism will make ungenerous use of their triumph or seek to hasten unduly the inevitable results. Our national culture will profit by the existence of the two competing types and for many decades to come the greater endowed universities, strong in the loyalty of their alumni, will survive, and while changing with the changing world, will preserve something of older traditions that the world will not willingly let die. But that in the final outcome the state university is to be the prevailing type hardly admits of doubt. The states are nothing less than empires. However humble the beginnings of the state university, whatever the temporary waste of funds, dissipation of energy, and compromising of ideals before the people have learned that politics and the university idea cannot keep house together, there always comes a time when the citizens of a great state begin to realize what a true university is, and begin to take pride in the excellence or feel humiliated by the deficiencies of their own institution; and from this time on there are hardly any limits to the possibilities of the state university. Why should we do less than Michigan, Wisconsin, or Indiana has done? the people ask. And the universities of Missouri, Ohio, Illinois, Texas, California, Iowa, and Minnesota enter upon a swift expansion that may and will stir to emulation any and all of the other states. No private endowments can keep pace with the forces thus liberated. The mere increase of the mill tax resulting from the raised valuation of property has recently given to one state university an augmentation of revenue equal to all that will accrue to Harvard from her fifteen-million-dollar campaign. And a single provision of the inheritance tax or a lien on copper deposits insures the future of others.

Confronted with the vision of so great a power, the first instinct

of human nature is to convert it to the exclusive service of our own preferences and prejudices. In France the old domination of education by the Jesuits was exchanged for the hardly less narrow sectarian tyranny of the secularists who suppressed the long established schools of the religious orders, banished God and the Bible from the schools, and tried to instil in an entire generation the spirit of an Ingersoll, a M. Homais, or a Haeckel. In spite of the numerous so-called denominational colleges in America, we have suffered little from such feuds. The state universities have been in the neutral sense of the word and in comparison with denominational colleges secular. They have never been militantly secularist, anti-clerical in the sense of anti-religious.

But there have been times and places where the state universities seemed to express opposition to another supposed ideal of the older types of college—namely, the conception of what is called a general or a cultural, as opposed to a strictly practical or vocational education. There were many natural causes for this, and plausible reasons could be alleged in its support. You are familiar with them. The new state institutions were the universities of the people. As such they ought to be both practical and democratic. Practical in the narrower sense meant that they should prepare the student for life, and to earn a living, should stress what we now call vocational studies. Democracy was interpreted to mean not only the democracy of persons—equal opportunity for all and the abolition of restrictive admission requirements—but the ideal was transferred from persons to things and it was gravely argued that the principles of democratic equality involved the equal educational, disciplinary, and cultural values of typewriting, bookkeeping, Greek, and mathematics. By a familiar debater's device for turning the tables on your opponent it was argued that the old education was vocational. Harvard College was a vocational school for ministers and lawyers and men of letters and professors. "Vocational yourself" was the cry. Lastly it could be said that the older endowed universities sufficed for the demand of the older, so-called cultural type of education and that the new universities of the people should provide for the needs of the new time.

Whatever temporary and opportunist truth there may have been in this contention, the question assumes a different aspect if the state universities are destined to be the chief, if not the sole, organs of higher education in America. In that case the exclusion from them of anything required for the full development of our humanity would be disastrous.

I should disappoint the expectations of those who invited me to speak today if I did not plead against a policy of such exclusion and invite your attention to the other side of the shield. As Emerson once said, we like every creature to do after his kind be it scorpion or asp, or, I will add, Greek professor. You expect the professor of Greek to make his formal and more or less eloquent plea for the ideal—for the ideals of culture, discipline, literature, tradition, and the things that he holds to be more excellent. You do not expect to believe him or to allow your actions to be modified by anything that he may say. But as the audience steals away, smothering its yawns, you with forced heartiness assure the speaker that it did them good. They needed that message. The net outcome is that of the parson's sermon in Tennyson's "Northern Farmer":

An' 'eärd um a bummin' awaäy loike a buzzard-clock ower my 'eäd,
An' I niver knaw'd whot a meän'd but I thowt a 'ad summut to saäy,
An' I thowt a said whot a owt to 'a said, an' I coom'd awaäy.

I have delivered addresses of this ideal quality, and may do so again. However slight the impression on the audience, they are not wholly thrown away. If the speaker is sincere and fervent, he may win over a few whose own spiritual hunger inclines them to believe that not in education either can man live by bread alone. He may confirm the courage of a few doubters and waverers who else would be stunned and dismayed by the incessant din of the hostile voices of the press, the platform, and fellow students. Even that slight result is quite worth while.

But today with your consent, I am in the mood to present my appeal in a less emotional way. All reasonable speakers must grow a little weary of fencing matches conducted in such a fog of generalization that there is no real crossing of blades or forcing of issues. Whether education should be preparation for life or culture, discipline or practical knowledge, vocational or general, these are not the alternatives of an "absolute either or". They are questions of time, place, person, measure, and degree, matters for compromise and adjustment. And nothing but the number of excellent persons who persist in the practice hinders me from saying that anyone who discourses about "education" in general without immediately going on to limit, distinguish, qualify, and specify some particular type of education is a charlatan. Such distinctions may check the flow of eloquence but they are indispensable to any clarity of thought or definiteness of conclusion. We have little more to learn either

from impressive recitals of the achievements of modern science or enthusiastic surveys of the glories of Greek literature. The controversies of twenty, thirty, or forty years ago have no relevance to the present situation. There is now no possibility of the predominance of humanistic studies. The question is of their survival. How did they come to gain their precarious foothold in our practical state universities, and having thus far connived at their development, shall we henceforth suppress them as an alien and parasitic growth?

An eminent European philosopher once formulated what he called the law of the heterogony of ends. It means that you may aim at a low mark and your arrow may take a higher flight. I do not much care for the pseudo-scientific terminology or the pretentious designation "law". But it expresses a fact of human experience. We do sometimes build better than we know. Saul, the son of Kish, goes forth to seek his father's asses and finds a Kingdom. A state legislature decrees an agricultural college and gets a university. Besides the divinity that shapes our ends, there is a reason in human nature for this. The soul of man is at least potentially a fire, as many philosophical and eloquent persons have told us from Heraclitus and Cicero to Voltaire, Sydney Smith, and Roosevelt. You cannot kindle the fire and set limits to the flame. You cannot bring together a large body of aspiring students and prescribe to them the rigid bounds of their intellectual curiosity. If you do you will chill the ardors that even the narrow tasks you set them presuppose. Every academy, technical school, and institution of higher learning tends by the very law of its being to become a university in the universally imputed, if not the etymological or legal sense of the word. The mediaeval university set up the limits of Aristotelian doctrine and the crystalline spheres of the Aristotelian heaven. But the new science and the new astronomy swept the barriers away. And the poet sang:

Past the wall unsurmounted that bars out our vision with iron and fire
Man hath sent forth his soul for the stars to comply with and suns to conspire.

And if the new dogmatisms of science, or the new scholasticisms of pseudo-science, should seek to suppress what they deem the idle and unpractical curiosities of the scholar and the dilettante they would in their turn provoke a no less victorious revolt of the human spirit.

Two of the colleagues who used to debate against me on the Greek and Latin question in the faculty of the University of Chicago

have become presidents of state universities. Both have written to me to say that they were distressed by the decline of the Greek departments in their institutions and to ask me to recommend a young man competent to build them up. The Germans established at Hamburg a strictly practical colonial institute for the study of geography, trade, and a colloquial knowledge of Oriental languages. It is now a complete university. The French organized not universities but what they called partial faculties in various provincial centers. They are now universities. An engineering school finds that its pupils cannot write English. It imports an eminent professor of English, but he cannot and will not teach English composition apart from English literature. And the teaching of English literature opens vistas of the entire history of European culture and imperatively calls for at least a preparatory training in Latin. The professors of a scientific school try to humanize and broaden its curriculum by studying the history of science. But you cannot divorce the history of science from the history of philosophy, and before they know it they find themselves trying to make out the meaning of Aristotle, and delivering lectures on the pre-Socratics. The more intelligent students and professors of a purely professional school of law become interested in the history and origins of our system of law. They set themselves to construing mediaeval Latin documents and the Latin of Gaius and Justinian, and if not content with primers they try to read the best books, as the treatises of Sir Henry Maine, or Carlyle's *History of Mediaeval Political Theory*, they find themselves discussing the early history of Christianity and the influence of Greek philosophy on Roman law.

This kind of infection spreads to the least likely quarters. I met a hulking athlete at a university reception the other day and in the endeavor to make conversation asked him what he was studying this term. Household economics was the reply. And what particular branch are you pursuing just now? I am writing a paper on the household economics of the Greeks. It was for this that he had forfeited the opportunity of knowing in the original the wanderings of Odysseus in the first and fairest of fairylands, Socrates' speech to his judges and Antigone weeping for her virginity, and Alcestis' farewell to her bridal bed. So schools of education whose classroom exercises consist largely of tirades against the study of Latin, and demonstrations that the translation will serve as well as the original, set their graduate students to writing quaintly amateurish dissertations on Greek education or the history of Ciceronianism. They are like the native who met me at the foot of a mountain which

I was about to climb in Estes Park. I asked him if he had ever been up to the top. "No", he said, "but I have seen it in the movies at Denver."

The purely agricultural college sometimes displays in its program a monstrous disproportion of courses on the philosophy and history of agriculture. That is of course, in part, the line of least resistance. It is easier than cultivating corn in the July fields. But it also illustrates that of which we are speaking—the spreading of interests, the demand for something other and more than the immediately practical, the unquenchable fire of intellectual and ideal curiosity in the soul of man. It is these instincts that have transformed so many agricultural and engineering colleges into universities, have organized within these at first predominantly practical universities historical, literary, linguistic, humanistic departments, which, beginning timidly with the training of a few masters of arts, have developed, in rivalry with the older universities, minutely specialized graduate instruction in the humanities with publication of monographs on the dative case and dissertations on the iota-subscript. So that now side by side with papers on bridge building or the care of milk, the Universities of Wisconsin, Michigan, and California publish monographs on Solon and the use of the adjective as a substantive in the *De rerum natura* of Lucretius. This spontaneous development of philological research in the state universities has not gone unopposed. Some politicians have fought these studies in the name of democracy and the practical needs of the people and some men of science misled by obsolete battle cries still regard them with distrust. There has doubtless been some pedantry, waste, and futility in this specialized productivity. In what field of research do we escape the wasteful methods of nature that scatters a thousand germs for one that comes to fruition?

The opponents of humanistic studies by which I, of course, mean more than Latin and Greek, plume themselves on their modernity. But their controversial methods are at least thirty years behind the actual situation. In view of the statistics and the preponderance of newspaper and student opinion, the conventional denunciation of Greek and Latin as obstacles to the pursuit of practical and modern studies is ludicrous or insincere. For the now meaningless antithesis of classics and science, of culture and practice, we must substitute a classification more nearly in accord with actual conditions. We may distinguish three or four groups of studies for this purpose. There are as the first two groups the pure physical sciences and their practical applications. There is then that

method of study of mind and the products of mind which endeavors to treat them as the matter of sciences analogous to the physical sciences; and there is finally the cultural, humanistic, and critical study of mind and its products. For convenience of designation we will call the one the unnatural sciences or the pseudo-sciences, and the other humanistic studies, the German *geistige Wissenschaften*. I shall try later to justify my use of the term "pseudo-sciences", but meanwhile you may take its disparaging implications as a mere expression of my prejudices. At any rate the humanist's first plea is that the representatives of the real sciences will take note of this distinction whether they accept it in its entirety or not. No reasonable humanist denies today that our entire civilization rests on the real sciences and their industrial applications, or challenges the prior lien of these studies on all educational subsidies that their effective development requires. When the apologists of our cause repeat as they all must and as Mrs. Humphrey Ward did only the other day the truism that man cannot live by bread alone, they are not disparaging the real sciences or sneering at those practical applications of science that have given man dominion over nature if not over himself. We are pointing to the plain fact that in every university many students have not the qualities of mind required for the successful investigation of physical problems, and many more will not be satisfied to study nothing but science. They have other spiritual needs, other intellectual curiosities; and in respect of such students the question today is not the simple alternative science or classics, it is shall they meet these imperative needs partly by the preparatory, the humanistic, the critical study, or exclusively by the premature and pseudo-scientific study of the human mind, its history, and its products.

In spite of the overwhelming victory of science all along the line, scientific men still complain that pure science is not adequately honored and encouraged in America and that they need more and better students to recruit the ranks of research. This may be true, but it is not true that the monopoly of promising talent by humanistic studies is in any appreciable degree responsible for the deficiency. It is from the swollen classes of the pseudo-sciences and the dilettante fringe of the literary courses that they must recruit their numbers. And when they have enrolled these recruits, if they find a large proportion of them too woolly-minded, too recalcitrant to severe logical thinking, too ignorant of the nature of precise language to profit by serious scientific teaching, they will perhaps have some inkling of the meaning of our contention that in spite

of the misleading usurpation of the prestige of the name science, the discipline of the pseudo-sciences is an inferior preparation for genuine scientific work to that which we offer.

Before proceeding further I must redeem my pledge to justify the term "pseudo-science". Outside of mathematics, chemistry, and physics our terminology can never be quite colorless. A scrupulous debater will use a word of derogatory suggestions only when he sincerely believes that popular opinion inclines so far in the opposite direction that his otherwise question-begging designation operates solely as a needed and justifiable rectification. A few years ago, for example, I would not have employed the word "radical" as a merely denunciatory epithet. The writers whom I would so designate have themselves to thank for the growing popular misuse of the word. They themselves intentionally substituted the poisonous revolutionary cant term "reactionary" for the comparatively colorless conservative. They are merely "hoist with their own petard" now that the rough and ready language of the people discards liberal for radical and interprets radical as revolutionary. For practical purposes, in the present line-up to save America the instinct of the people is right. And we need have no scruples in adopting their use of language in this respect.

The justification of the term "pseudo-science" is still clearer. Originally it may have been used to characterize the irresponsibility of certain exploitations and popularizations of the real sciences. It was the Champagne science *mousseuse* satirized by O. W. Holmes of which every newspaper and some sessions of the American Academy of Science offer specimens. Huxley incorporates the word in the title of two essays. But he uses it mainly of the amateur science displayed by the Duke of Argyle and British bishops in their attacks on the science of Darwin and Tyndall and Huxley himself. If Huxley were now living he would be the first to recognize that times have changed and that the foolish of today take the name of science in vain not to assail the real sciences but to support their own social and economic and political opinions by remote and impertinent scientific analogies, as when a silly clergyman exhibits the skeleton of an extinct armored dinosaur as an argument against preparedness, or a militant feminist argues that husbands among rotifers are pigmies attached to the female and parasitic upon it, or a behaviorist solemnly pretends that it matters two straws to real human psychology whether "the avoiding reaction in paramecium" is to be interpreted as tropistic or a case of trial and error. In any case it is not with reference to abuses within the real sciences that

I wish to use the term "pseudo-science". Men of science, it is true, tell me that the most exact sciences do have their lunatic fringe. But I do not believe that this kind of pseudo-science can do much harm. I presume that the scientific men themselves will explode it. And tho I can sometimes divine its presence, my ignorance makes it unsafe to pronounce the judgment that some acquaintance with their subject-matter makes me willing to hazard in the pseudo-sciences proper. When the academy of sciences debates the question of other worlds than ours and the infinity of the universe, I may have an uneasy surmise that they really know nothing about it, and that they are giving their minds a holiday in cosmogonical metaphysics and poetry. But I am silenced by the possibility that there may be a definite mathematical meaning underlying language which my ignorance cannot distinguish from the rhetoric of Plato's *Timaeus*, Poe's "Eureka", and Bergson's *Creative Evolution*. When an eminent physiologist tells me that it is the presence of "creatin" that gives distinctive taste and odor to roast beef, I translate his queer Greek, "the presence of meatiness makes roast beef meaty", and am tempted to ask what is the difference between this and the formula of the Platonic *Phaedo* that the presence of heat makes things hot. But I am dimly aware that, however odd his language, the physiological chemist may attach a definite and verifiable meaning to creatin in terms of CHN and O. If Professor Wilamowitz of Berlin reconstructs an entire lost epic of Hesiod out of three fragments in the scholia of Pindar, I know precisely what to think of the performance and am not afraid to say it. But when science presents me with two photographs of the bust of Haeckel's missing link or pithecanthropos reconstructed by M. Eugene DeBois from a remarkable tooth, a skull cap, and a piece of thigh bone found sixty feet away on the island of Java, my ignorance again ties my tongue. I open my mouth and shut my eyes, and am willing to believe that investigators of the physical sciences never pyramid their hypotheses, or are tempted to startle the world with premature announcements of unverifiable discoveries—or, at any rate, that if they do their colleagues will take care of them in time.

But what I unrepentingly call the "pseudo-sciences" cannot overawe and silence me in that way. For the material of the pseudo-sciences is that of the conjectural philology of Berlin, and of my own less ambitious and less systematic studies. It is the human mind, its products, and its history, of which language and literature are the chief records and documents, and here the experience, the tact, the common sense, the trained critical instinct, of the humanist claim their rights.

It is not necessary that you should go all the way with me in order to allow some force to this argument. You may believe that pseudo-science is an unfair and question-begging term. You may hold that the studies thus designated contain the promise and the germs of real future sciences and that those who prophesy their failure are merely repeating the error of the mediaeval, the Renaissance, the nineteenth-century opponents of Roger Bacon, Galileo, and Darwin. You may argue, as their advocates do, that laboratory psychology, pedagogical psychology, sociology, the science of education, the sciences of anthropology and of prehistoric human origins are still admittedly in the tentative stage, and that it is unfair to challenge them to produce results comparable to those of the established physical sciences. All this could be conceded without affecting the humanist's main contention. The justification of the term "pseudo-sciences" is that the present disproportion between pretensions and performance in these subjects exceeds the measure allowed to human fallibility. Humanists may err in excess of scepticism. They do not dogmatically and prophetically deny the future possibilities of the pseudo-sciences. But the representatives of these subjects do attempt to discount their own prophecies in the cash of present control of all educational policies and the substitution of their methods of study of the human mind and its products for the methods of a critical humanism. Any illustrations of this that I may quote are merely typical. Professor King for example writes in his *Development of Religion*: "The scientist is perfectly safe in assuming that his realm may finally be extended so as to include everything. For there could be no science on any other assumption." A similar spirit of confident prophecy, as you remember, inspired an act to establish the catholepistemiad or University of Michigania, which in anticipation of the limitation of university presidencies to professors of education prescribes that there shall be "a didaxia or professorship of catholepistemia the didactor of which shall be president of the insitution". In 1916 Professor Münsterberg wrote: "You turn to me because one whose life work is psychology may best foresee the days that are to come." It may be argued that these are not fair or representative examples, but I could quote scores in the same style and to the same purport. It is only under the immediate fire of humanist criticism that they fall back on the modest evasion that they are merely experimenting in the direction of a possible future science. Effectiveness of assertion, says Mr. Bernard Shaw, is the Alpha and Omega of style; and the pseudo-sciences have been successful in capturing

public opinion. How else explain the infatuation of a man of the caliber of Henry Adams who in his own pseudo-scientific essay, "The Rule of Phase Applied to History", writes and is taken seriously by the public when he writes, "Thus results the plain assurance that the future of thought and therefore of history lies in the hands of the physicist, and that the future historian must seek his education in the world of mathematical physics." Mr. Adams must have known that a training in mathematical physics does *not* fit a man to interpret historical documents or write readably about them. But to obtain a hearing today one must advertise himself as the discoverer of a mare's nest. The popular reviewer accepts literally the paradox of Professor James that mere sanity is the cheapest and least significant of the mental qualities. And the modernist critic habitually sneers at one of the best informed and most instructive of recent French writers, Emile Faguet, because "he has left no theory by which we may perpetuate his name"; and at America's foremost man of letters, Lowell, because "he had a weakness for stopping short of the ultimate."

Those then who are repelled by the negative and obstructive attitude of the humanist towards these tendencies of modern thought may receive his criticism merely as a check on their excesses, and a warning against their aberrations. That I think is the attitude of some of my friends who profess these new sciences. They feel that they can afford to smile good naturedly at our railings while profiting by the detail of our criticism, because after all they have the ear of the public and we are impotent to shake their control. To take one typical example, there can be no question that the better informed psychologists have in late years hedged on the question of the existence of disciplinary studies under the pressure of humanistic criticism, tho they may cover this retreat by reports of new series of experiments. President Stanley Hall and some of his pupils still assure the public that "science has pronounced" that there is no such thing as mental discipline. But the prudent majority are more cautious.

I need not then, and obviously cannot here consider how far the pseudo-sciences are literally what the term implies, and so deserve to rank with astrology or psychical research or Freudism. I have touched on the subject elsewhere and shall sometime take it up in detail. Such a discussion would begin with a challenge to name specific results not as well obtainable by other methods. That challenge has never been met, except recently by the claim that the psychologist's tests of intelligence proved of immense

practical value in the rapid organization of the United States army. I mention this claim not to examine it here but merely in order not to seem to overlook the main, if not the only, argument in rebuttal of the humanist's scepticism. To test the claim would involve a discussion of the line of demarcation between psychology and physiology, an examination of the enormous mass of uncritical evidence, and experiments on a large scale as to the ability of educated men who are not professional psychologists to sift a mass of raw recruits by a roughly sufficient classification of their degree of intelligence. That is impossible and unnecessary here. For I am not advocating the suppression of the pseudo-sciences, or prophesying that nothing will ever come from all the enormous labor now apparently wasted on them. We are merely pleading for the survival of critical humanism, both as a check upon them and as an indispensable element in the complete self-realization of the human spirit. We only ask you to consider what kind of world, what culture, what sort of university faculties, what histories, what literature would result from an unrestricted domination of the pseudo-sciences, and the entire suppression of humanists and all the things of which they are the imperfect representatives?

The radical labor leader, Mr. Foster, testifying before the Senate committee, said, "I take the position that Lester F. Ward takes." "Who is Lester F. Ward?" said Senator Sterling, and the *New Republic* waxed eloquent over the ignorance that knew nothing of "our most distinguished philosopher". Unlike the Senator, I have read Lester F. Ward. I reserve for another time the examination of the claim that he is our most distinguished philosopher. But here is the substance of a sentence from his *Glimpses of the Cosmos*: "What strikes me is that in every case of a claim to the discovery of new truth that I have thus far met with it is one or some small part of one that I have not only stated earlier, but fully set forth, carefully analyzed, and connected with other related truths." To put the issue concretely, is this the temper and attitude of mind that we wish to see flourish in our universities uncontrolled by the criticism of a different tradition? Do we wish the next generation of our college faculties apart from the strictly physical sciences to consist wholly of emulators and disciples of the Lester F. Wards, the Stanley Halls, the Thorndikes, the Veblens, the Münsterbergs, the Pattens, the Scott Nearings? of young men who think their thoughts, share their tastes, reason with their logic and in their categories, and express themselves in their diction? Shall there be no qualifications of the academic atmosphere

and the ideals that such men would establish by the witnessing or protesting presence of a few teachers and students who may or may not have heard of Lester F. Ward, but who have heard of Lowell and Gildersleeve? Would you prefer an England wholly dominated by the mind and temper of the Herbert Spencers, the Buckles, the Bains, the Cliffords, the Professor Graham Wallases, unrelieved by any survival of the spirit of Arnold, Tennyson, Froude, Jebb, Jowett, Mackail, and Murray? Would you preserve the France of Taine, Tarde, LeBon, Binet, Calparède and abolish or forget the France of St. Beuve, Cousin, Renan, Gaston Boissier, Croiset, and Faguet? Are you interested only in the Germany of Buechner, Haeckel, Ostwald, Freud, and do you care nothing for the Germany of Curtius, Mommsen, and Wilamowitz? That is quite literally the issue and the choice presented to the American university of the next two decades, and more particularly to the state universities. To transfer this issue from persons to things and books, the practical abolition of critical humanistic scholarship in our universities would bring about a rapid deterioration of all historical, literary, and linguistic knowledge and teaching thruout the nation. And in the end it would reduce to hopeless confusion and insecurity the very materials upon which the pseudo-sciences try to build. It must be admitted that our Germanized philology in its abuse of hypothesis sometimes vies with the crudest pseudo-science in the diffusion of misinformation. But whatever its temporary aberrations, humanism never abandons the principle of the control of its facts by a critical mastery of the original sources. Neither the pseudo-scientists, nor alas! the scientists outside of their laboratories, seem to have the slightest conception of what this involves. They complacently publish, they put on the reference shelves of their courses, they send their students to consult books that are confused compilations from secondary and tertiary authorities, who cannot be trusted to put any of their facts correctly and in the right historical perspective. Lewes' *Biographical History of Philosophy*, Draper's *Intellectual Development of Europe*, White's *Warfare of Theology and Science*, Benn's *Greek Philosophy*, and the historical parts of nearly all books on the science of literary origins, the science of institutional origins, and the science of religion might serve as illustrations. A voluminous history of science published by Professor Henry Smith in 1914 devotes an entire volume to the history of ancient science. It is hopelessly unscientific and uncritical. But probably neither the author nor the majority of its readers has any notion why its statements are so untrustworthy and its

methods so inadequate. Instinctive rightness of perception in such matters is as impossible without long discipline in the interpretation of original texts as it is in the physical sciences without the habit of the laboratory. The university that, be the students few or many, supports its humanistic departments both for undergraduate culture and for the intenser graduate study that in this field is the equivalent of research is preserving from atrophy one of the essential critical organs for the ascertainment of truth—that total truth to the pursuit of which it is consecrated by its very name. What makes a university is not the science of the individual professor, at the best a vanishing quantity in the face of the infinite, but the potentialities of the collectivity—the fact that somewhere and by somebody every present possibility of human knowledge is embodied and represented in its highest form, the fact that there is someone whom you can consult who *knows*, who is not dependent on the encyclopaedia or the latest newspaper report of European work. Men of science accept and respect this university ideal in other fields. When they have freed their minds from the prejudices of obsolete controversies they will appreciate its application in this case. The study of the so-called classical humanities, apart from their tried and tested direct disciplinary cultural and formative value for young minds, is the systematic and critical investigation of fifteen hundred years of continuous literature, philosophy, and civilization, a civilization significant in itself and doubly significant as the chief original though now no longer the chief basis of our own. When once they have rid themselves of polemics no longer relevant it is not conceivable that thoughtful men of science should wish so vast a domain of knowledge to be represented in the Universitas Studiorum only by dilettante, amateurish, and secondary methods of study, or by the structures of hypothesis that the pseudo-sciences erect with material uncritically compiled from translations and handbooks.

Do I need to answer the naïve suggestion that is sometimes put forth that provision should be made for a definitive translation of all the classics and for authoritative textbooks in antiquities and the history of ancient thought, and that when this is done one custodian of such a library in every university would amply suffice for all the requirements of culture and science? There can of course be no definitive translation or textbook. In the past eighty years the new material and the progress of classical studies have been only less marvelous than those of the physical sciences. But even if the time should come when no further accession of material could be

looked for and all the accounts were closed the interpretation of fifteen hundred years of the life of humanity, and its shifting applications to our own ever-changing life and thought could never cease to be a living and growing thing. And if it could be confined in a definite system and a final canon, the custodian of such a dead corpus of knowledge would die to living science himself and cease to be capable of interpreting or imparting it.

In spite of Carlyle, a university will always be something more than a collection of books. The highest thought, as the Aristotelian metaphysics teaches, is identical with its object, and exists only as realized in the "active intellect". The book without the illuminating mind is, as Plato says, an inert and unresponsive thing. It cannot convey real knowledge. That lives in the communion of master and disciple, and in the tradition of true teaching. The writing of textbooks, he says, is a form of play, an entertainment of leisure, a memorandum against oblivion and forgetfulness. Intellectual seriousness begins when the teacher, finding a fit soul, in the interchange of active discussion sows and implants thoughts wedded to a true science, capable of defending themselves and their author, not sterile, but bearing within them the seed that in the continuance of a living tradition shall make our knowledge and the transmission of knowledge to our successors immortal.

Something will be lacking, this is our final plea, something will be lacking to the university which comes short of this Platonic ideal in any considerable department of human knowledge. And most assuredly to the university in which the originality, the beauty, the rationality, the wealth of thought and suggestion, the lessons of moral and political experience, the enormous material for modern comparisons and analogies, the incomparable human and humanizing interest of the civilizations of Greece and Rome survive only in the dusty tomes of the library and fail of due spiritual reincarnation in fitting souls.

THE OBLIGATION OF THE STATE TOWARD SCIENTIFIC RESEARCH

James Rowland Angell was born in Burlington, Vermont, May 8, 1869. He was educated at the University of Michigan where he received the bachelor's degree in 1890, and the master's in 1891, at Harvard (A.M., 1892), at the University of Berlin, the University of Halle, and at Vienna, Paris, and Leipzig. The University of Vermont conferred the Litt. D. degree on him in 1915. He became instructor in philosophy at the University of Minnesota in 1893; assistant professor of psychology and director of the psychological laboratory at the University of Chicago, 1894-1901; associate professor, 1901-5; professor and head of the department, from 1905; senior dean, from 1908; dean of the University faculties, from 1911; acting president, 1918-19. In 1921 he was elected president of Yale University. He was formerly president of the University of Chicago Settlement; a member and president of the American Psychological Association; member of the committee of the adjutant-general's office on classification of personnel in the army; of the committee of the War Department on education and special training, from 1918; appointed exchange professor at the Sorbonne in 1914; is a member of Phi Beta Kappa, Sigma Xi, and the National Academy of Sciences; chairman of the National Research Council, 1919-20; now president of the Carnegie Corporation of New York. He is the author of *Psychology*, *Chapters from Modern Psychology*, and *Introduction to Psychology*.

THE OBLIGATION OF THE STATE TOWARD SCIENTIFIC RESEARCH

By JAMES ROWLAND ANGELL

ALL DISCUSSIONS regarding the state and its obligations are in this country beset with the difficulty of distinguishing between the federal state and the states which compose it. Far be it from me to plunge into the jungles of political philosophy and constitutional law which open up before one who attempts to elaborate a philosophy of the state which shall do justice to these rivals for consideration! It is difficult enough for our courts to untangle the purely legislative and legal complications of their relations. But in the present instance, I am thinking of the forty-eight great commonwealths, among which Indiana holds so honorable a place. It is *their* opportunities and obligations in the matter of research which I would discuss.

My thesis, which is perhaps an article of faith rather than a demonstrable proposition, is that the obligation of the state to promote research is simply one phase of its obligation to promote the welfare of its citizens, and to some incidental commentary upon this thesis, I forthwith proceed. That I shall bring conviction to any who dissent from the doctrine at the outset, I regard as altogether dubious. I conceive my function as primarily that of formulating certain of the grounds upon which one who entertains this view may be justified of his belief.

Let it be recognized that whatever the theoretical justification, many of the states, and conspicuously Indiana, have already in practice committed themselves to the support of research. It matters not what motives may have originally prompted the decision to embark on this course. The fact itself is the significant thing, and, as such, it has created a precedent in no way likely to be permanently reversed. The real issue, I take it, is rather as to the *extent* to which research shall be endowed by the state, and the particular fields of investigation which may be held to justify such investment of its financial resources.

There has, for example, been no special hesitation to establish stations for agricultural research, and the results of the work of many of these stations are looked upon with unqualified pride,

and have undoubtedly secured substantial advantages to the community. Unquestionably in these instances the motive has been economic gain, and the support so willingly given by legislatures has been procured upon the assurance of such economic return. Many of these stations have been established in connection with the agricultural colleges of the states, and their investigatory work has often tended to fuse with the purely instructional work of the college. Indeed, in not a few instances, the energies of these institutions have been so monopolized by the obligations to teach the college students and the surrounding farming community, that their activity as agents for research has been gravely compromised. This fact must not, however, for a moment be allowed to screen the more significant fact that the states have recognized in their establishment the legitimacy of financing scientific research with public funds.

While I believe that numerically there are probably more instances of the financial support of research in agriculture and the allied sciences than in any other single group of scientific interests, there have also been numerous illustrations of a similar subsidy of research in engineering of various types, and of investigations of natural resources, such as minerals. I believe there are also a few instances of the subsidy of medical research in the field of public health. In any event, I have no thought of attempting a complete census of these varied ranges of research upon which one or more of the states have already embarked, but simply wish to call somewhat vividly to your attention the fact that a considerable group of investigatory interests have already secured state support.

It will appear at once from the mere rehearsal of this list of research undertakings that, superficially considered at least, they all represent the fields of applied rather than of pure science, and this is measurably true, altho certain of them inevitably run out into investigations which would usually be classed as belonging to pure science. This is the fact, for example, in certain of the botanical investigations undertaken in connection with agricultural problems. But the case is even stronger than this, inasmuch as practically all the states which have state universities have committed themselves to research in pure science, including the social and humanistic sciences, as well as the natural sciences. The extent of this support has varied very widely in different parts of the country and at different times. It has on occasion been frank and open and administered with wide public understanding of what was being done. On other occasions it has been accomplished quietly

by indirection, and almost by subterfuge, and with no attempt to justify it in any general way to the supporting public.

Every college president who has to go before a state legislature for funds is quite familiar with the difference in the practical problems which confront him when he seeks financial support for research in pure science, and for research in such forms of applied science as may presumably be of commercial or industrial significance in the state. It is indeed an audacious executive who would attempt to secure from such a legislature funds for investigation in the ancient languages or in many branches of historical and social science. To be sure, a few highly intelligent states have discovered that a competent research bureau dealing with matters of political, social, and economic science can render enormous aid to a legislature in its attempt to devise new and helpful legislation which shall improve upon the experience of other communities, and even other nations, and shall escape the interdict of unconstitutionality imposed by the Supreme Court. But, broadly speaking, it is only those branches of natural science whose relation to applied science in agriculture, medicine, and the industries is likely to be fairly obvious that the university president finds his task at all simple in securing funds for the prosecution of research. He is in practice most apt, if he does anything to encourage such research, to accomplish it by private agreement with the men he appoints to his professorial positions, ostensibly as teachers, but actually with the understanding that they are to carry on such investigational enterprises as they are able.

It appears, therefore, at once that while the principle of state support for scientific investigation has already been conceded, the practical operation of it leaves very much to be desired, and this is peculiarly true at that point where the practical bearing of the subject-matter of research upon the interests of daily life becomes obscure to the plain man and the common citizen. This twilight zone is encountered very early in any invasion of the humanistic field.

There are at least two great services rendered by scientific research. In the first place, it represents the principle of life and growth in science itself. It may be compared to the reproductive process in organic life, by means of which new generations of thought and discovery are brought into being, and the future enriched with new ideas and new methods for promoting the welfare of humanity. Without it, science and knowledge in all its branches is not only sterile, but ultimately dies and decays. Moreover, nothing is more

certain than that without incessant research in pure science, no continued discoveries of practical value can accrue. Altho it is perfectly impossible to predict from what direction in pure science the next discovery will come which will revolutionize or profoundly affect the affairs of daily life, nothing is more certain than the fact that only from the results of such research conducted with utter freedom and in all fields of endeavor can the race hope to progress in its mastery of nature. The nation that slights pure science will assuredly fall behind in the race for equality, to say nothing of supremacy.

So long as the human mind continues to function, there need be no fear that research will ever wholly disappear, for it may fairly be said that there is intrinsic to the human intelligence an essential instinct for, and interest in, the discovery of the novel, and there are abundant influences in human life which compel intelligence to exert itself in the mastery of new fields. On the other hand, however, there are the widest possible differences in the results to be attained, depending upon whether in the one case research is fostered and encouraged, both by social recognition and by financial support, or whether, in the other, it is disregarded and allowed to struggle with circumstances wholly unaided. A civilization which recognizes the paramount value of scientific investigation, and which furnishes to it resources and the recognition of public esteem, is certain to outstrip its contemporaries in its promotion of the breadth and depth of human life.

In the second place, there is as a universal by-product of the prosecution of research the creation of an atmosphere of intellectual alertness, of independence of judgment, of freshness of outlook, which compared with intellectual surroundings where knowledge is regarded as complete, finished, done once and for all, is wholly unmistakable and of the utmost value. It is quite possible to demonstrate by actual observation the correctness of this verdict. Without venturing the invidious mention of names and places, it may still be said with absolute confidence that there are certain educational institutions, for example, where the dogmatic and intellectually self-complacent attitude of those in charge bespeaks the pedant who believes himself thoro master of his field, and for whom that field contains no dark corners, no unexplored recesses. The atmosphere of such an institution is not only intellectually smug and vain, it is to all real mental development mephitic, a place where none can breathe who are really alive intellectually. Over against such an atmosphere, one finds other institutions in which the

entire attitude is one of open-minded observation of the truths just ahead, and one of constant critical re-examination of the supposed truths with which we are now provided. Such an atmosphere is tonic, bracing, and inspiring, intolerant of scholasticism and intellectual dogmatism. It speaks of growth, of life, and of progress, and is in its educational effects as different from the first as darkness from light.

But we must come back to the underlying question of the significance of research in pure science, and of research in the humanistic branches of learning, as constituting the real problem. What can be said by way of justification, and by way of convincing appeal, for the intelligent public support of research in these directions? We must qualify our enquiry at the very outset by recognizing the necessity for a certain division of functions among the various research agencies of the country, and we must also be prepared to offer reasonable assurance that the research work whose promotion we propose shall be carried out by thoroly competent persons, and that funds devoted to such purposes shall not be squandered upon the miscellaneous endeavors of the unfit.

From the standpoint of ultimate scientific, social, and economic advantage, it is quite indefensible to attempt to secure public support for branches of investigation already adequately provided for thru extant agencies. Owing to motives of local pride, and sometimes of selfish interest, state institutions are peculiarly exposed to the danger of injudicious and unjustifiable duplication of work done in neighboring communities. In the case of the state university, this often takes the form of propaganda to have the local institution the largest of its kind, to have it cover the entire field of human learning, and, in general, to gratify the usually laudable human desire for pre-eminence. The interests of research in such imperialistic propaganda have commonly been secondary, but they have nevertheless often been involved. The state university, for example, must have the greatest engineering school, covering engineering in all its branches; must have the largest and best equipped agricultural establishment; must have the finest school for journalism and commerce; and so forth and so on. Incidentally, to each of these added items in the educational program, there is likely to be a footnote devoted to the interests of research, and in time this footnote tends to expand into a full-fledged paragraph in the body of the text. Now there are undoubtedly certain fields of investigation—chemistry may serve as a case in point—in which it is highly improbable that for some time to come there is any likelihood of excessive pro-

ductivity. But there are abundant instances of a very different character. The amount of marine engineering which can be profitably developed in interior agricultural communities is certainly not very large; the amount of research in vertebrate paleontology which the scientific demands of the time intrinsically justify is in the nature of the case somewhat limited; the extent of the profitable forms of research which can by many institutions be undertaken in the field of the ancient languages unquestionably has its limits; and abundant other instances will readily suggest themselves. It must then be frankly recognized, as part of any intelligent attempt to secure general public endorsement of research, that there is an intrinsic fitness in things which makes it inappropriate to undertake in certain institutions and in certain regions types of work which are obviously indigenous to other institutions or communities, or which are for one reason or another already adequately cared for elsewhere. Any attempt to expand either the instructional or the investigative work of our institutions beyond the boundaries of essential intellectual propriety and the general effectiveness of our national program as a whole, must in the long run bring discredit upon its promoters and undermine the public confidence in scientific and educational experts. It may be remarked that the National Research Council is hoping to bring about thru coöperative means a wiser and more judicious distribution of these responsibilities than now exist.

In a similar way must be recognized the necessity for exercising every possible care to protect the research career from exploitation by the pedant, the fakir, and the crank. Research work is in the nature of the case of a character to render prediction of its ultimate value always precarious and frequently impossible. It belongs, like certain of our agricultural processes, to a group of undertakings where, for the best interests of the community, there should always probably be some excess of attempted production over the actual needs, in view of the fact that inevitably a certain fraction of the effort expended will either be temporarily or permanently unfruitful. But, on the other hand, research must in the long run justify itself to public opinion, and this it will do only if it be confided to the best trained and the intellectually most competent. There is, accordingly, peculiarly urgent need for the exercise of drastic selection of the men privileged to participate at public expense in the administration of research. Nor should it be supposed that this obligation is in any sense confined to scientific investigation. It is similar in character to the obligation resting upon a public service commission to see

that the community is served by the scientifically competent, that its bridges are safe, that its roadways are durably built, that its water supply is pure, and that its courts are honest and intelligent. It differs solely in the fact that the public mind has not as yet come to recognize so fully as in these other cases the cardinal relation of successful research to the highest development of the community.

With these two qualifications in mind, to wit, an intelligent distribution of the responsibility for research, and the further obligation of careful selection of the personnel entrusted with this high privilege, we may again revert to the discussion of the general justification of investigation in pure science and in the humanities.

In the language of the market-place, it is relatively easier "to sell" research in pure natural science than it is in the humanistic branches and in part at least, because the utilities which ever and again arise from the practical applications of investigations in these sciences are more obvious, and generally more closely related to direct economic gain. In part it is because of the less perfected technique by which humanistic investigation is conducted, as well as by virtue of the more esoteric character of some phases of the subject-matter. A few illustrations may bring out what is here in mind.

It is fairly clear even to the uneducated how a discovery in pure chemistry, tho made with no thought of its practical value, may improve the processes in an industry like that of the pulp manufacturers or that of the dye-makers, and the saving in money and the improvement in the output are both reasonably obvious. Similarly, it can be readily understood how other discoveries may lead to improved fertilizers with a great increase in agricultural productivity. But it is not at all clear what possible relation to ultimate community advantage exists between an archaeological discovery in the upper valley of the Nile and the conduct of village life in central Indiana. Nor is it easy for the average individual to discern what ultimate advantages can accrue to American communities from a study of early Icelandic. The typical scholar of the Victorian or the pre-Victorian period is at once disposed to throw up his hands and insist upon the intellectual immorality of attempting to discover any immediate practical values in these fields, urging as the sole justification for pure research—knowledge for knowledge's sake. This is a comforting doctrine and one which states undoubtedly a psychological truth so far as concerns the investigator. Again and again he has been of a mind to glory in his specialty in the measure in which it quite certainly

could have no practical value. But in the larger conception of the social organism, and particularly in the conception which is obligatory for the directors of a state educational system, there must ultimately be some significant contact points between research which the state can reasonably be asked to finance and the public consequences of such investigations.

On closer analysis of the situation it is found to subdivide itself into a considerable series of differing fields. In economics, for example, and political science, in certain phases of both sociology and history, it is entirely clear that research may have direct and immediate value for the political and social institutions of a state, even when the investigations are undertaken entirely from the point of view of their theoretical and intellectual interest. Legislation may be improved, institutional organization may be bettered, and the general public appreciation of its own problems may be immensely enhanced as the result of such investigations. Indeed, it is hardly an exaggeration to say that amateur legislation is the worst enemy of democratic institutions. But it is much more difficult in the field of the linguistic studies to exhibit this direct and possibly immediate return to community advantage. Certainly the argument for it has to be based upon more indirect and elaborate considerations, and even then it is often difficult to justify the promotion of research as such in distinction from the mere diffusion of already acquired knowledge.

Education in the United States has recognized this situation practically by the limitations in the actual languages taught in our various institutions. In an earlier generation Greek and Latin were universal in colleges. Later came French, German, Spanish, and Italian, with here and there Portuguese, Russian, Chinese, and Japanese. But many of the languages of modern Europe are to the best of my knowledge and belief entirely unrepresented, to say nothing of the oriental tongues. This is neither the time nor the place to enter upon any extended analysis of the educational principles which should control the mere teaching of ancient or modern languages, and without this it would be difficult to discuss intelligently the corresponding limitations of justifiable research. Suffice it to say, that as a pragmatic principle the state can hardly be asked to endow research which may not be expected in the long run to make some measurable return to the intellectual life of the community which fosters it; and, at any given time, financial resources being in the nature of the case limited, it will always be necessary to choose where development shall first occur. Under

these conditions one may predict with entire certainty that resources will not generally be available for investigatory work in fields for which the public has absolutely no appreciation. Funds for work in these fields must either be secured from private benefactors or must wait upon the slow education of the public mind. In the meantime, it will always be legitimate to seek and urge such support wherever the case may be made clear that the outcome of such research, either immediately or indirectly, may be expected to contribute to the essential development of the community. In this conception of the community there is implied not simply its physical comfort and the decencies of life, but its intellectual, moral, and spiritual development, which constitute after all the great and lasting criteria of national development. American communities as a whole are at the moment peculiarly deficient in an appreciation of the fine arts and in opportunities for growth and discipline in such appreciation. In this field alone the possibilities of education are almost limitless, and with such education will come a higher evaluation of many lines of humanistic study and investigation.

Altho the fundamental aims of education still constitute a favorite subject of debate at educational conventions and other similar gatherings, there is a general concensus that the education afforded by a state should at least train for effective citizenship. If society would only stand still, and if the various agencies which it employs to carry on its business would similarly remain static for a little while, the problem proposed to the educator would be relatively simple. One could train a young man for a specific job with some certainty that when he was delivered by the university for the use of society he would be ready to take up his calling with little or no necessity for readjustment. Unfortunately for this theory of education, life is provokingly fluid; little or nothing stays put. Whether we call it progress or decay, we have at least to reckon with the fact of constant change, and if this be true, it seems fairly clear that the dominant emphasis in our educational program should fall upon such forms of training as promise to convey in largest degree the power to do constructive thinking and the ability to master new situations. These powers are of the very essence of research, and any educational program which substantially disregards them may be challenged as fundamentally defective.

Oddly enough, one-half of this principle is very generally accepted. Certainly it is a commonplace to hear our educational leaders harp upon the necessity of ability to master new tasks, and

to accomplish constructive work; and yet in the face of this, probably the great majority of them are still advocating forms of educational training in which this constructive element is all but wholly lacking. Surely a good case may be made for the obligation of a state, in so far as it desires really trained young people, to see to it that each and every one is from the earliest practicable point brought up in an atmosphere saturated with incentives to critical thinking, to research, and to constructive intellectual independence. How far our conventional academic processes fall short of this ideal is best known to those engaged in their administration. It surely needs no magnification by the present speaker on this occasion.

While we are considering education, we may well touch upon certain other significant points. It is common to contrast with one another, as tho the two were wholly antithetical, research work and teaching. The common assumption is that teaching is, as such, an inevitable impediment to the conduct of research. So much is this the case that one constantly hears lauded the advantages of research institutes, in contra-distinction to university appointments, as giving the investigator complete freedom from the interruptions of teaching. Unquestionably, there is a large measure of truth in this antithesis, for there are many forms of research which require for their successful prosecution the uninterrupted time and attention of the investigator, and just in that degree in which he is obliged to give his time to instruction in the classroom is his accomplishment in investigation likely to be curtailed.

On the other hand, there is a deeper sense in which teaching and research are to be considered simply phases of a common process, and, despite the possibility of exaggerating the extent to which this is true, the consideration merits a brief discussion because it presents a conception of the situation ordinarily neglected and often denied.

Men dealing with the advanced aspects of a subject and with classes made up of fairly expert graduate students find that it is possible to conduct the instruction quite in the spirit of research. It is, indeed, often possible for the productive investigator to take advantage of such opportunities to present his own investigatory work in ways which are immensely stimulating to his students and clarifying to himself. But the condition of the man dealing with young students and very elementary subjects is generally thought to be of a radically different kind, and one precluding the possibility of any thought of research. Certain it is that not a few instructors of elementary classes carry on their work in a spirit utterly remote from that of investigation; but it is doubtful whether there

is any field in which this is altogether necessary and it is certain that for the most part a competent instructor can always surround his work with a critical atmosphere of scientific investigation. The best and most inspiring teaching is always of this kind. Indeed, it may perhaps be called the only true teaching. Around large ranges of our academical work it is entirely practicable to throw the spirit of investigation, and only when this is done does such work take on a genuinely university character.

In the last analysis then, it is in part, at least, a fallacious antithesis to set investigation and teaching over against one another as mutually incompatible. The facts are quite otherwise and there is a large body of thoroly competent opinion holding that the investigator is in the long run sure to be more productive of sound research, provided he is kept in contact with a group of well-trained and alert young scholars. No one can doubt that the clarifying effect upon scientific thinking which comes from the necessity of making lucid exposition of new discoveries and theories to a competent and critical audience is of immense value. Moreover, the history of scientific research is replete with instances of investigators who have multiplied many times their own efficiency thru the immediate stimulating effect which they have exercised over students under their tutelage—an effect which would have been much more slowly and much less widely propagated had such men been working in relative isolation.

The state which possesses a well-equipped university has at its disposal a body of experts who may and should be called upon whenever the state is confronted with new scientific problems. But the state cannot maintain a competent staff of this kind unless it affords the university adequate resources to retain such men, and a precondition of their retention is the supplying of opportunities for research.

The university also enjoys one peculiar advantage as a center for scientific investigation in that it normally has within its faculty men representing a considerable range of scientific fields. Most of the great scientific problems confronting a modern state involve a considerable group of sciences for their solution. Water supply, sewage, public health, all run out into questions where the chemist, the bacteriologist, the physician, and the engineer, to mention no others, are involved. The presence of men in all these fields on a well-appointed university faculty renders it possible to secure there a coöperative attack upon these basic problems such as no other group of institutions can offer. That the universities have not been more widely used in this way reflects no great credit on our state

governments, but conditions have in this particular in many states improved very rapidly of late.

While the states have gone far to recognize certain forms of research, their universities have for the most part come in for a disproportionately small share of the corresponding financial support. University budgets are drawn primarily to cover instruction and administration. Any funds for general research purposes are ordinarily smuggled in under cover of one or other of these headings. The exceptions to this rule are so few as practically to prove it correct. Now while it is undoubtedly true that the best university teaching is always done from the point of view of discovery and investigation, it is equally true that this spirit cannot be kept alive by mere act of will. There must be adequate libraries, laboratories, and equipment to permit the actual conduct of scientific research, otherwise the spirit flags and the whole operation presently becomes a farce. These facilities require money and in relatively considerable amounts, and it is part of the duty of the intelligent citizens of the state to see to it that legislatures have this fact brought vividly home to them. To leave this task wholly to the university authorities is stupid and unfair. It puts upon them more than their just share of the burden of intelligent legislation, and it greatly decreases the possibilities of prompt action, for legislatures inevitably regard all such officials as somewhat partisan and prejudiced.

To sum up the whole matter then, the situation appears to be one in which the obligation of the state to support research is hardly open to question. Enlightened self-interest, if nothing higher, indicates unequivocally the wisdom of this course. Whether the state shall accomplish its objects exclusively thru special boards, bureaus, institutes, and commissions, or thru the machinery of its state educational institutions, the speaker has made no attempt to assert. Indeed, the conditions in the different states vary so widely, and for that matter the intrinsic character of certain of the problems to be solved, that probably no general rule is or should be valid. In any event, the detailed execution of a plan is in this case of far less moment than the recognition of a fundamental opportunity and obligation.

In the interests of education, for the sake of public health and happiness, and for the promotion of the highest intellectual and spiritual development of the community, a liberal support of a well-considered program of scientific and humanistic investigation is indispensable. A bold and fearless campaign for the recognition of this principle is one of the pressing obligations resting on all good citizens.

THE FUTURE OF LEGAL EDUCATION

Roscoe Pound was born at Lincoln, Nebraska, on October 27, 1870. He received the A.B. degree at the University of Nebraska in 1888, the A.M. in 1889, and the Ph.D. in 1897. In 1889-90 he attended the Harvard Law School. The following institutions have conferred honorary degrees upon him: Northwestern University, LL.M., 1908; University of Michigan, LL.D., 1913; University of Nebraska, LL.D., 1913, D.C.L., 1917; University of Missouri, LL.D., 1916; University of Chicago, LL.D., 1916; Brown University, LL.D., 1919; Harvard University, LL.D., 1920. Dr. Pound was admitted to the bar in 1890, and practiced at Lincoln, Nebraska, 1890-1901 and 1903-7. In 1899 he became assistant professor of law at the University of Nebraska, and dean of the College of Law in 1903. In 1907 he went to Northwestern University as professor of law, where he remained two years, when he went to the University of Chicago. In 1910 he became Story professor of law in Harvard University; in 1913, Carter professor of jurisprudence; and dean of the Law School in 1916. Dr. Pound served as director of the Botanical Survey of Nebraska from 1892 to 1903; commissioner of appeals, in the supreme court of Nebraska, 1901-3; Nebraska commissioner on uniform state laws, 1904-7. He is a member of the Nebraska Academy of Sciences, Ecological Society of America, and American Microscopical Society; Associé Libre de l'Académie Internationale de Géographie Botanique; a fellow of the American Association for the Advancement of Science and of the American Academy of Arts and Sciences; member of the Botanical Society of America. He was chairman of the section of legal education of the American Bar Association, 1907; secretary of the Nebraska State Bar Association, 1901-7; president of the Association of American Law Schools, 1911; and is a director of the American Judicature Society. Dean Pound is the author (with Dr. F. E. Clements) of *Phytogeography of Nebraska*, *Readings on the History and System of the Common Law*, *Readings on Roman Law*, *Cases on Torts* (editor), *Lectures on the Philosophy of Freemasonry*, and of many monographs and articles in European and American legal and botanical periodicals. He is one of the editors of the *International Journal of Ethics* and was one of the editors of *Flora of Nebraska* and of *Reports of the Botanical Survey of Nebraska*, from 1892 to 1907.

THE FUTURE OF LEGAL EDUCATION

By ROSCOE POUND

IN THE GOOD OLD DAYS of household remedies, the prudent housewife who was well instructed in the wisdom of her foremothers was wont to prepare an annual draught for the children of the household and to administer it in early spring, that their systems might, as it were, undergo a wholesome house-cleaning in preparation for another year. Originally she gathered her own herbs and distilled her own extracts. But today, if there are any that adhere to the ancient ways, a paternal state, by means of pure food and drug legislation, enables them to buy the ingredients with assurance at the neighborhood drug-store. A current view of education pictures teaching as a process of this sort. It is the administration of a series of tonic and alterative and possibly purgative draughts in the springtime of life, that the system may be toned up for the strenuous competitive years that are to follow. Ladle in hand, the teacher stands beside a bowl of chemically pure dope which the wisdom and experience of the past have prescribed. Its ingredients are guaranteed by state inspection and the mixing has been done under state supervision. It contains everything which organized zeal and organized interest have been able to impress upon the legislative wisdom and it is free from anything which the latest wave of propaganda has been able to move the lawmaker to exclude. An orderly procession of youth passes before the teacher and each receives the appointed dose. It is the teacher's function to fill the ladle scrupulously, to administer the dose fairly, and to see that it is duly swallowed. In this spirit, the president of our greatest university in point of numbers has told us that all we need in teaching is laborious, steady-going mediocrity. The teacher must be a person who will not be tempted to slip anything of his own into the officially certified mixture; he must be one upon whom we may rely to fill the ladle to its full capacity, to drop none of its contents, to let no one go by undosed, to pour the full content down each student throat, and to see that it goes down. That such instruction by dosing the mind is as futile as we now deem the dosing of the body, to which it bears so obvious an analogy, was one of the heresies for which Socrates was executed. Faith in a spring medicine which will safeguard

the mind of youth against disturbing doubts and restless thoughts and rebellious ideas is as naïve as the old-time faith in the efficacy of sulphur and molasses to fortify the youthful body against disease.

Altho law was one of the first subjects of academic study in the universities of modern Europe, our Anglo-American law has had primarily a non-academic development. Blackstone's teaching at Oxford bore fruit on this side of the water much more than at home. Even now university teaching of law has made but little progress in England. The oldest American law school is entering on its second century. But it has pursued the study of law by the method of the university, as distinguished from the method of the law office, for not more than half of its existence, and scientific study of law in university law schools has come into general recognition in America within a generation. During the greater part of its history, the legal profession in the United States was trained after the manner of apprenticeship in the offices of practitioners. And today, when the majority of those who are admitted to the bar have come to be school-trained, they proceed for much the greater part from schools which preserve the methods and modes of thought of the law office; from schools which adhere to the sulphur-and-molasses theory of instruction and look askance upon the scientific and academic. The good side of this story—for it has a good side—is not our concern at this moment. What concerns us now is to note how the system of apprenticeship under a preceptor in a law office has left its stamp both on the law and on lawyers. To the latter, the tradition in which they had been trained seemed the legal order of nature; arbitrary rules resting upon history seemed to exist for their own sake; time-consuming procedure seemed "scientific" because it had lost all relation to realities, and solving words, in the absence of general ideas, passed for principles. Truly when a body of law so shaped came into the universities it came upon dangerous ground. Not the devil, says Lord Acton, but St. Thomas Aquinas was the first Whig. For when the Angelical Doctor taught men to sustain authority by reason, he taught them to try authority by reason and presently to overthrow it by reason. When Judge Baldwin urges that the academic law teacher of today has created a "new peril" in our law, a crisis comparable, it may be, to the twelfth-century conflict of state law with church law, to the sixteenth-century conflict with Roman law, to the rise of equity, to the development of the law merchant, and to the movement for codification and influence of French law at the beginning of the last century, he speaks truly from the standpoint of one who could say judicially that our

happily obsolete fellow-servant doctrine rested "upon considerations of right and justice that have been generally accepted by the people of the United States". May we not hope much from this "new peril" when we note what each preceding peril achieved for the legal administration of justice and what element of the legal system was imperiled in each case?

For what is it that scientific teaching of law in universities puts in jeopardy? "Reason", says Lord Coke, "is the life of the law; nay the common law itself is nothing else but reason." In the university this reason becomes a living reason, in touch with and stimulated by all the intellectual movements of the time. Law becomes in truth one of the social sciences. Its materials are not measured and shaped solely with reference to themselves. Its methods and ideas must pass the ordeal of comparison with the methods and ideas of economics and politics and history and sociology. Much that has been dear to the practitioner of the past is threatened in such an environment. But it was already moribund and the question was only whether it should fall before critical study and be rebuilt upon scientific lines or should fall before the legislative steam roller and be replaced by the offhand products of the legislative exigencies of the moment. The main point in teaching law, as in all teaching, is to know truly the subject. Nothing can be known thru itself alone. "To know rules of law", said the Roman jurist, "is not merely to understand the words, but as well their force and operation." It is not in the atmosphere of the client-caretaker, who is the leading type in the American bar of today, nor in schools which reflect only his ideals, that law will be understood or taught in its force and operation. We must rely rather upon the atmosphere of a university where the teacher of law will be held to justify his learning before scientific colleagues in many cognate fields. One needs but look at the legal periodicals which are issuing from American university law schools to see that while the law in law sheep-binding or law buckram is abstract and lifeless, the law in our schools is concrete and living. In any rational use of the term, the practical law of today is the law taught in our academic law schools, not the definitions and hollow formulas and arbitrary rules of our examinations for admission to the bar.

President Butler thinks of sociological jurisprudence as legal osteopathy and is shocked at the idea of a professorial masseur massaging the *Corpus Juris*. Perhaps some may feel that there are dry bones in the law that would not be the worse for such a process. But before we condemn the professorial healer, let us see what the

regular practitioners have done and are doing. Within a generation they have allowed the whole law of public utilities to pass from the domain of adjudication to that of administration. Within a decade they have allowed a large part of the law of torts to pass from courts to industrial commissions. Because of their indifference to a matter of grave concern to the mass of the people, the whole conduct of petty litigation bids fair to depart from judicial methods and to become administrative. In one state but the other day the settlement of mutual accounts between farmers and commission merchants was taken from courts of equity and committed to an agricultural commission. Even in criminal law, which has been *par excellence* the domain of the common law, juvenile courts, boards of children's guardians, parole and probation commissions, and administrative individualisation of penal treatment are constantly narrowing the actual field of judicial justice. For more than a century the lawyer's main interest has been in the security of property and contract. Today these fields too are invaded by administrative jurisdiction. After courts have vainly sought to adjudicate water rights and regulate the exercise of them with the traditional procedural machinery and along traditional lines, an increasing number of states are committing these things to boards of engineers. After courts have stubbornly refused to take account of the exigencies and the methods of modern business, the mercantile community is more and more turning to extra-legal adjustment of business controversies. As to new problems, such as industrial disputes, no one thinks of referring them to judicial cognizance. We turn at once to administrative industrial tribunals. A condition in professional thought and judicial administration which drives a people of our traditions to revert to personal justice—to set up administrative tribunals proceeding after the manner of Harun al Raschid or of St. Louis under the oak at Vincennes—such a condition cries out for juristic osteopathy.

Another serious obstacle to the development of legal education is popular aversion to the imposition of standards for admission to the profession. Here lawyer and layman work in concert. The practitioner feels that the scientifically trained lawyer will not reverently set behind historical anomalies and thus will unsettle what has long been established. The layman feels that it is "undemocratic" to exact a scientific training of one who is to practice a profession so nearly related to politics as the profession of law. The distrust of the competent is an old-time by-product of demo-

cracy. The Athenian Demos feared the exceptional man and Athenian political institutions were adapted to the elimination of the superior. It was thought dangerous to have any man in the community whose powers and abilities were above the ordinary. Even philosophers became infected with this feeling.

Plato says, speaking, of the ideal state:

. Shall we not find that in such a city a shoemaker is only a shoemaker and not a pilot along with shoemaking; and that the farmer is only a farmer and not a judge along with farming; and that the soldier is only a soldier and not a business man besides. And if a man who through wisdom were able to become everything and to do everything were to come to our city and should wish to show us his poems, we should honor him, but we should tell him there is no such person in our city, nor is there any such allowed to be, and we should send him to some other city.

There is nothing peculiarly American in our cult of incompetency. But it puts a heavy strain on institutions where so much is made to turn upon the law. Our common-law doctrine of the supremacy of law makes the most vital social and political questions into legal questions and expects the judges to pronounce oracles upon them. When a conscientious but narrowly trained bench delivers narrow pronouncements that write the word "can't" over every clause of our constitutions, state and national, we begin to doubt the wisdom of the founders and experiment with political nostrums rather than try the dangerous expedient of insuring that only competent and thoroly trained lawyers enter the profession that leads to the bench. Surely scientific training of the bar is much less of a wrench to our institutions than many things we have been doing in the endeavor to get away from petty interpretations of a great legal document. In the end, nothing less than this training of those who are to interpret and apply that document may be made to serve our need. We must admit in our practice and not merely in our speech that law is a science.

Our law must be studied as other great sciences are studied and taught at the universities; as deeply, by like methods, and with as thorough a concentration and life-long devotion of all the powers of a learned and studious faculty.

But we are told that law is a practical thing and that the law of academic law schools is too much what ought to be and not what is. Engineering is a practical matter; medicine is a practical matter; architecture is a practical matter. Yes, agriculture is a practical matter. In each of these practical subjects the practitioner has had to learn that what ought to be and what is are inseparably connected; that what is can only maintain itself by being or becoming what ought to be, and that much doing of a routine process by rule of

thumb does not of necessity give insight into what is nor capacity to judge of what ought to be.

Note for a moment what the so-called practical legal education has done for American administration of justice. For one thing it has filled our law books with specious solving words which cannot stand up before analysis and defeat the ends of law in their application. One has but to read the current decisions on "mutuality" in equity to see the mischief such words may do in giving an appearance of justification to arbitrary and unjust results. He has but to read the current decisions as to "waiver" to see how the law may be unsettled by such words while preserving an appearance of certainty. The critical student of law will think also of "malice", "privity", "remoteness", "estoppel", and many more of this breed of over-worked and much-enduring words that should be given an eight-hour day and pay for over-time.

Again, in the last generation "practical" legal education gave us that faith in procedure for its own sake the results of which still disfigure the application of law in our courts and drive an impatient people more and more to administration at the expense of adjudication. There has been much improvement in the past two decades. Perhaps ability to "get error into the record" is no longer the accepted test of a skilful lawyer. Perhaps we are not so sure as we were a generation ago that it is unscientific to win a case upon its merits. But hypertrophy of procedure is still the distinguishing mark of American law, and improvement has gone along with the advent of scientifically trained lawyers and has gone farthest where such lawyers have had the most influence.

Again, in the last generation "practical" legal education gave us a joy and faith in subtle logical distinctions for their own sake. If it could be shown logically that a harsh and unjust rule was logically demanded by analysis of our traditional legal materials, that result was hailed as a triumph. The imperative demands of justice and good sense have made most of these juristic or judicial triumphs of the nineteenth century short-lived. But the teacher must still struggle with the remnants of imputed negligence and non-liability of manufacturer or vendor to third persons and many like examples of the "practical" in action. In truth they were so completely practical that they proved wholly impractical.

For another example, one may vouch the joy and faith of the last generation in arbitrary long-established rules for their own sake; its belief that the fixed rules of our law of evidence were an organon for the discovery of truth; its belief that the feudal rules of our law of

real property had some intrinsic universal validity and that every part of the administration of justice could and should be subjected to strict rules after this model. The past generation of lawyers saw virtue in such things. A rule that was arbitrary and at variance with common sense proved that law was law. It reminded us, to use Coke's words, that if reason is the life of the law, yet this means the "artificial reason and judgment of the law and not every man's natural reason". Thus every departure from the dictates of convenience and the requirements of justice seemed to justify itself.

Again, the "practical" training of the past gave us the assumption that the common law is a body of fixed principles and the faith in absolute deduction therefrom which has led in so many subjects of vital present concern to a throwing over of law and resort to administrative boards, when a scientific development of our traditional methods and traditional legal materials would have sufficed.

But, above all, the so-called practical legal education led in the last century to a naïve faith in abstract justice. Abstract justice of the content of abstract rules was everything; the results of their actual application to concrete cases were a negligible detail. The abstract justice of a universal formula was something valuable in itself, be the results in action what they might. The classical story of the English judge, before the setting up of the divorce court, who in sentencing a workingman convicted of bigamy explained to him how by three legal proceedings and the expenditure of some nine hundred pounds he would have been legally competent to remarry after his wife had deserted him and gone to live with an adulterer, and assured him that it had ever been the glory of England not to have one law for the rich and another for the poor, is a just satire upon the general attitude of the profession in the last century. Our own reports are full of solemn pronouncements of the same sort, when measured by the facts of everyday life. Within a generation American courts were telling us that a statute as to hours of labor made the laborers "wards of the state"; that statutes as to payment of wages in cash treated laborers as imbeciles; that a statute forbidding payment of employees in orders on a company store classed them with infants, lunatics, and felons; that an employers' liability act made the employer liable arbitrarily where there was no responsibility in morals; and that the fellow-servant rule was but declaratory of general ideas of justice entertained by the whole people. And the results have been quite as bad as the language used in reaching them. The common-law doctrine of supremacy of law was needlessly imperiled by twenty-five years of unintelligent

judicial obstruction of social legislation. The lawyer's habit of working out all possible difficulties by a purely logical process on the basis of abstract propositions and his instinctive fear that anything new might open a way for magisterial caprice has made the profession much more critical of projects for improving the law than fertile in devising them. Hence the most effective improvements in the administration of justice today have been worked out by laymen and are in the hands of administrative rather than of judicial officers. Hence, also, we are looking to extra-legal or, at least, extra-judicial agencies to solve the great legal problem of today—how to secure the social interests which are threatened by the everyday phenomena of industrial warfare.

Three stages may be perceived in the development of the American bar. The first stage is marked by the hegemony of the trial lawyer. The great achievements of the bar were in the forum and the most conspicuous success was success before juries in the trial of criminal causes. Hence the modes of thought of the profession were molded by the exigencies of *nisi prius*. Apprenticeship to an experienced, resourceful, busy trial lawyer was the ideal training. The bench and the legislature were recruited from the trial bar. The law was largely fashioned to be a body of rules for use in the trial of causes. This stage lasted until the Civil War and perhaps still persists in some rural or frontier communities.

In a second stage, leadership passed to the railroad lawyer. A generation ago the goal of professional ambition and the proof of professional success was to represent a railroad. The leaders of the profession were permanently employed as defenders; their energies, their ingenuity, and their learning were constantly employed in defeating or thwarting those who sought relief against railroad companies in the courts. But judges and legislators, especially where the bench was elective, were seldom chosen from these leaders and often waged an unequal contest with them, which has left many marks upon the law of today. In this stage also apprenticeship was a useful mode of training; but the highest positions called for trained minds. Yet the training needed was exclusively historical and analytical, for creative juristic thinking was quite outside the province of the leaders of the profession.

Today the hegemony has passed to the client-caretaker. He seldom or never goes into court. His function is to advise; to administer trusts; to conserve investments; to organize, re-organize, and direct business enterprises; to point out dangers and mark safe channels and chart reefs for the business adventurer; to act, as it

were, as a steward for the absentee owners of our industries. The other functions of the lawyer he leaves to the lower walks of the profession. The actual administration of justice interests him only as it discloses reefs or bars or currents to be avoided by the pilot of business men. The legal order as a means of satisfying human wants, the great mass of human interests that clamor for recognition, the perennial problem of reconciling these interests in the administration of justice between man and man, mean nothing to him. If he thinks of them, it is to dismiss them as matters for the theorist, as subjects for professors of economics or of sociology. Thus the leaders of the profession have no interest in the most vital questions of the law of today, and in consequence the hegemony in our institutions is passing from courts to executives and from lawyers to administrators. If a state university were training men simply to take high places in a profession whose leaders are permanently of this type, its governing board should consider seriously how far they may justify the expenditure of public funds in maintaining a law school.

To what end does the state provide legal education for its youth? In part, one may concede, it seeks to train its youth in the different vocations by which they may make their way in life and take up and bear the burdens of manhood. But surely the main consideration is that in our Anglo-American polity so much depends on law that good lawyers are a social asset. Of the three sides to the lawyer's activities, namely, (1) the earning of a livelihood, (2) securing the rights and defending the interests of those who employ him, and (3) promoting the administration of justice according to law and advancing right and justice in the world,—of these three, the state may, perhaps, have an interest in all. But the interest of the university is in the third. And the paramount interest of the state is in the third also. The professional organization of the Middle Ages and the apprentice system of training took care of the first and second. But the breakdown of professional organization and ruthless destruction of professional feeling in the Jefferson Brick era of American society left us little beyond professional memories and traditional phrases. Until the rise of the academic law school and the recent revival of professional feeling, our apprentice system has done no more than train for the socially least important side of the lawyer's activities.

When we reflect upon this situation we cannot wonder at the general distrust of law and dissatisfaction with legal institutions. We cannot wonder that the thoughtful layman is dissatisfied with the lawyer and the thoughtful lawyer is dissatisfied with himself.

We cannot wonder at the steady rise of administrative boards and commissions, at the revival of personal government, at the growth of a government of men at the expense of a government of laws which has been going forward in every American jurisdiction for a generation. We cannot wonder at the demand for the packing of courts by those who see no way of improving the law. We cannot wonder at the vogue of projects for recall of judges, for recall of judicial decisions, and like crude and wasteful attempts to secure the recognition of pressing social needs which those best qualified to make the legal system a living instrument of justice overlook or ignore. So long as the leaders of the bar do nothing to make the materials of our legal tradition available for the needs of the twentieth century, and our legislative lawmakers, more zealous than well instructed in the work they have to do, continue to justify the words of the chronicler—"the more they spake of law the more they did unlaw"—so long the public will seek refuge in specious projects of reforming the outward machinery of our legal order in the vain hope of curing its inward spirit. Some years ago, when it was the fashion in many quarters to urge the recall of judicial decisions, I used to urge as a substitute the recall of law teachers. For the real remedy, the enduring remedy, is to be found in a scientifically educated profession, a profession conscious of and trained to face the problems of the legal order of tomorrow, a profession which can furnish safe and conscientious client-caretakers, but has a higher conception of the law and of the lawyer's duty than is needed for mere client-caretaking—the enduring remedy is in a profession so educated, from which to recruit judges and legislators and administrative officers.

Institutions of learning were first set up in colonial America in order to provide ministers for the churches—the prime social need of that time and place. For the social order then was simple. Society was homogeneous. The postulates of that civilization were ethical only. Today the social order is complex. Society is heterogeneous. The postulates of our civilization are not merely ethical; they are legal, economic, medical, mechanical, perhaps aesthetic, as well. None of these may be left to purely trade or professional development, trusting to internal competition for progress and to apprentice methods for training.

Surely in a university—even in an American university of 1920—we may apply other standards than the canon of pecuniary reward or the canon of predatory achievement. But the teaching profession has been so discredited by the current application of these standards

that law teachers have hesitated to speak out before the so-called men of achievement. And yet what the latter have achieved for the law, when measured by the end of law, is sorry enough and consists chiefly in a steady loss of ground for law, to the profit of administration, thruout the English-speaking world. Now it is precisely in the English-speaking world that practical training, so called, is the rule, and the canons of pecuniary reward and predatory achievement are the measure of juristic and professional success. If the legal scholar in America finds himself rated low by these criteria, he may ask what those who are rated high thereby may show to justify the standards. Judged by their fruits in the administration of justice, by their fruits in the form and content of our legal system, despite the limited opportunities of the scholar, hampered by professional distrust of his science and by valuing of his opinions by the amount of his salary, the scholar must take the first place.

Indeed, the man of action deceives himself grossly when he assumes that he and he only is in touch with reality; that he and he only is doing the things that count. The last of the Caesars has fallen, but the thought of the jurisconsults of the days of the first Caesar is law in half of the world. Nothing remains of the work of the men of action of antiquity, but the thinking of Greek philosophers rules the thinking of today and has left its mark upon the action of all time. When Diogenes was put up for sale as a slave, he called out to the bidders, "Who buys me buys a master." And so it proved. For Xenocrates, the man of action, is known for nothing else but that he furnished a home and provided a livelihood for the eccentric philosopher who was his slave. As beside the fleeting results of competitive and predatory exertion, the things of permanence in our civilization are the work of Hebrew prophets and Greek philosophers and Roman jurisconsults and mediaeval monks and modern scientists. The men who achieved fortunes at the bar have been forgotten and what they did has proved as transient as their fortunes while the work of Story and of Kent stands fast. For the reality is human civilization; the real achievement is in maintaining and furthering civilization. Enduring work in law has been done by those who saw in it a product of the civilization of the past, a means of maintaining the civilization of today, and a means of furthering the civilization of tomorrow; not by those who have used it in the competitive struggles of the moment. It was not by looking on law, after the fashion of the "practical" man, as a set of formulas ordained at the creation or as a body of fixed rules devised

by inspired or all-wise forefathers or as a series of enactments imposed by an omniscient lawgiver of yesterday or of today, that the law of the city of Rome was made the law of the world; nor will our law maintain itself as a law of the world if left to those who so regard it. In all ages the law of the "practical" lawyer has been an illusion. He has thought of fixed rules, of mechanical application, of settled postulates and a perfect logical technique of developing them, of eternal legal principles and their necessary implications, of a closed system admitting only of formal improvement. The reality is a complex and ever-changing legal order whereby values are conserved and human wants are satisfied, worked out by men along with all human institutions as both a condition and a product of civilization and to be studied and taught as such. Law has not been made by the dogmatic formulas of the books ground out to order for law publishers for "practical" purposes, but by the academic lectures of Story and Greenleaf; it is not making today by means of digests or encyclopedias, but thru the writings of Wigmore and Williston. Certainly I need not argue in this presence that the state is educating lawyers, not in a futile attempt to preserve forever the *status quo* of today, not to train money-making lawyers, not to raise up sagacious client-caretakers, but to advance justice—"the greatest interest of man on earth"—to maintain, to hand down, to further human civilization.

As might be expected in a purely apprentice system of training, the first legal instruction was crudely dogmatic. Coke's *Commentary on Littleton*, Serjeant Williams' *Notes to Saunders' Reports*, Cruise's *Digest of the Law of Real Property* were the instruments of teaching, and the student learned the law as a body of rules tempered by a series of maxims and a few rigid principles and conceptions. Night law schools and schools which make a specialty of local law and practice still teach for the most part in this spirit. Later, the law schools which developed in connection with our universities, but as outgrowths of teaching in lawyers' offices, gave us a new type of common-law textbook, under the influence of the treatises of Continental Europe. The Continental treatises, products of the philosophical jurisprudence of the seventeenth and eighteenth centuries, laid chief stress upon the reasons behind legal doctrines. Accordingly, for a season, pseudo-reasons and *ex post facto* rationalizings of dogma became the fashion in our law teaching. Such things are still relied on in some quarters where instruction from textbooks is still in vogue. The English analytical and English and American historical jurisprudence of the last half of the nineteenth

century long ago gave a death blow to this treating of authority as embodied reason and working up of reasons after the event to explain and to justify it. With the advent of these methods, instruction in our law schools became truly scientific and worthy of a university. But much remains to be done. For our nineteenth-century analytical and historical methods do no more than criticize the law from within by a critique drawn from the law itself. In a period of stability when formal improvement of the results of the period of growth in the seventeenth and eighteenth centuries was the chief juristic need, these methods served us well. Today, in a new period of growth, they are failing us. For when we try to use them for creative work in legal science our task is like that of Baron Munchausen in pulling himself out of the swamp by his long whiskers. In jurisprudence, as in all other sciences, we are turning from the analytical and historical to the functional; we are asking not merely what things are and how they came to be what they are, but what they do and how and to what end they do it. Nowhere is this modern way of thinking more fruitful than in the science of law.

Instead of the legal interpretation of society and the legal order in terms of a social contract, or the ethical interpretation in terms of "rights", or the metaphysical interpretation in terms of deduction from a fundamental formula, or the biological interpretation in terms of a huge super-organism, we are turning to a functional interpretation. We are thinking of the legal order as a piece of social engineering, as a human attempt to conserve values and eliminate friction and preclude waste in the process of satisfying human wants. If we look to physical and biological science to augment the means of satisfying wants as well as to conserve them, we look to the social sciences to teach us how men may apply them to their purposes with a minimum of friction and waste. Hence the jurist must think of a great task, or rather of a series of great tasks, of social engineering. For his problem is not one of abstract harmonizing of human wills. It is one of concrete securing or realizing of human interests. The central tragedy of existence is that there are not enough of the material goods of existence, as it were, to go round; that while individual wants are infinite, the material means of satisfying those wants are finite; that while, in common phrase, we all want the earth, there are many of us but there is only one earth. Thus the task of the legal order becomes one of conserving the goods of existence in order to make them go as far as possible, of preventing friction in the use of them and waste in the enjoyment of them, so that where each may not have all that he claims, he may at least have all that

is possible. But this functional attitude has as yet made little impression on the teaching of Anglo-American law. Nor will it do so except in universities where law is taught, not in the way of commentaries on authoritative formulations of ultimate reason, but as a living process of growth and adjustment.

Nowhere may our universities do more for civilization than in making possible a rebirth of legal science as they have already remade medical science. For this rebirth is possible only thru legal education, and the only legal education that can bring it about must be had in universities. The future of our academic law schools is the future of legal education, and the future of legal education in this country is the future of American law. Nay, more. Our Anglo-American polity is so characteristically, so completely a legal polity, that the future of legal education is nothing less than the future of American institutions.

A PRESENT NEED IN AMERICAN PROFESSIONAL EDUCATION

Robert Andrews Millikan was born at Morrison, Illinois, on March 22, 1868. He received the A.B. degree at Oberlin College in 1891, the A.M. in 1893, and the Ph.D. at Columbia in 1895. He spent the year 1895-96 at the University of Berlin and the University of Goettingen. The honorary degree of Sc.D. was conferred on him by Oberlin in 1911, Northwestern University in 1913, the University of Pennsylvania in 1915, Columbia University in 1917, and Amherst College in 1917. Mr. Millikan's teaching career began at Oberlin College in 1891, where he was tutor in physics, in which capacity he served for two years. In 1896 he became assistant in physics at the University of Chicago, associate in 1897, instructor in 1899, assistant professor in 1902, associate professor in 1907, professor in 1910. Professor Millikan was awarded the Comstock prize for research in electricity by the National Academy of Sciences in 1913. In 1916 he was Clarke lecturer at Amherst. In 1917 he was Hitchcock lecturer at the University of California, and was elected vice-chairman of the National Research Council, Washington. The same year he was commissioned lieutenant-colonel in the Signal Corps, United States Reserves, and chief of the Science and Research Division of the Signal Corps. He has served as a trustee of Oberlin College since 1917. Among the organizations and societies of which he is a member are the American Academy of Arts and Sciences (Fellow, 1914), American Association for the Advancement of Science (vice-president, 1911), National Academy of Science, American Philosophical Society, American Physical Society (member of the executive council, 1905-9; since 1911; president 1915-17), Sigma Xi, and Phi Beta Kappa. He was made, in 1919, a corresponding member of La Société Batave de Philosophie Experimentale à Rotterdam, and honorary member of the Royal Institution of Great Britain. During the present year he is American representative on the International Solvay Congress, Brussels. He was associate editor of *Physical Review* from 1903 to 1916; joint editor of the University of Chicago *Science Series* in 1915; and has since 1915 been associate editor of the *Proceedings* of the National Academy of Sciences. His writings include: *A College Course of Laboratory Experiments in Physics*, *The Theory of Optics* (translated from the German), *Mechanics*, *Molecular Physics and Heat*, *A First Course in Physics*, *A Laboratory Course in Physics for Secondary Schools*, *Electricity*, *Sound and Light*, *The Electron*, *Practical Physics*, two chapters in *The New World of Science*, and more than sixty articles in technical scientific journals. Professor Millikan was the first to succeed in isolating an electron.]

A PRESENT NEED IN AMERICAN PROFESSIONAL EDUCATION

By ROBERT ANDREWS MILLIKAN

I WISH to present in the briefest possible compass what, from my point of view, is the outstanding deficiency in technical and engineering education in the United States. The undertaking may seem a bit presumptuous in a man who has spent his life in the pursuit of pure science, and who is today connected with an institution which has no engineering school. I have myself taken, however, a considerable part of the engineering-school course; I have been thrown in my work into the closest contact with the engineering societies and with the most prominent men in the engineering profession; I have been a close student of several types of technical developments in the United States, and I had exceptional opportunity, during the recent war, to see the results of our scientific and technical efforts, when we were called upon to exert ourselves to the utmost and to get results in the shortest possible time. Permit me first to present a few concrete illustrations of the results of these experiences.

It is to the eternal credit of the United States that the two most significant and important advances of the last half-century in scientific and technical lines have had their inception in this country. The conquest of the air by man after centuries of failure is due almost entirely to Americans. The names of Wright, Chanute, and Langley, the three most potent names in the history of this achievement, are all, I am proud to say, American names.

Again the science and art of the electrical transmission of speech has been an American product. There is scarcely a foreign thread in the whole fabric of its development. Bell and Grey, the original discoverers, were both Americans. The big advance made by Pupin in the introduction of the loaded line is the result of work done in an American university, and the immense advance which has recently been made in the development and use of vacuum tube repeaters and amplifiers, which are now finding applications in an extraordinary number of commercial fields, is wholly an American achievement. Of these things we may be extravagantly proud.

Now look into the other side of the picture. Despite the fact that the conquest of the air was first achieved in this country, when the war broke out, we were so far behind France, England, and Germany in the development of the art of aviation that we couldn't see their dust. During the war (barring the development of the Liberty motor—a credit to America) we attempted to do nothing in aviation except to copy British, French, and Italian planes. Why? Because these nations had so much better planes than we had produced, or could hope to produce in quick time, that the only wise course was to copy foreign makes. But why had we not already produced equally good ones? Because the American public had not had a sufficient appreciation of the possibilities and the needs of this sort of scientific work to adequately support it, and because we had not in this country developed a sufficient number of men of outstanding ability in this field to enable us to keep neck and neck with our European competitors.

The story of the application of the vacuum tube to the purposes of the war is remarkably similar. We thought we led the world in this field, but the special commissioner whom General Squier sent to Europe to study European developments in signaling came back and reported that the British and French had greatly outdistanced us in applying these newer developments to the purposes of the war. A high official in the company which was itself responsible for the original application of vacuum tubes to telephony corroborated to me this statement, and at the meeting of the Physical Society in Chicago in November one of the most prominent of our own radio-engineers declared, "I take off my hat to the young British radio-engineer."

The same sort of a story comes from many other fields of activity. I was recently standing with a prominent American chemist who was on the front in a responsible post in the American Chemical Warfare Service. He showed me a German gas mask with the remark, "I want you to see the best gas mask which was developed during the war." "Why", said I, "my chemical friends told me that the American mask was superior to all others." Said he: "It was beyond all question the poorest mask which actually was in use at the front, in absorbing power for the gas which it was called upon to protect against. The quantitative tests of the research department of the Chemical Warfare Service of the A.E.F. showed the various masks to run somewhat like this: German 100, English 70, French 40, American 10 or 15."

25 let us frankly admit the possible unrepresentative character of the foregoing showings because of the tremendous stimulus of immediate and dire necessity under which our European friends worked, in contrast with our own remoteness from the scene of conflict, and let us make a comparison which has nothing to do with the war.

Will anyone who knows anything about the situation for a moment claim that when we count up the world's outstanding men in scientific and technical lines the number of American names in comparison with those belonging to England, France, and Germany is in any way proportionate to our population? Certainly not in my own field. Here we cannot show more than a half or a third of our proper proportion. In the field of chemistry one would scarcely think of comparing the group of men whom we have produced during the past thirty years with those who have honored Germany, and I suspect that physics and chemistry are fairly representative of most of the sciences. To what then is the deficiency due?

I do not think that it is due to a lack in the native capacity of men born on American soil, and I have a little evidence upon this point which I should like to present. During the past thirty years we have had opportunity in the graduate work at the University of Chicago to compare the students who come to this department from all over the United States and from Canada. Now the population of Canada is exceedingly similar to that of certain portions of our own country. But we have learned to expect an exceptional man when we get an honor student from Toronto or McGill. In a word, it seems to me that the British honor system has had a greater success in one particular than has our own educational system, namely *in selecting and giving exceptional training to the exceptional man*. Our great public educational system has done one thing which is immensely vital to progress; it has raised the average intelligence of our people to a very high level. But it is even more vital to progress to select and to train leaders intensively, for is it not her Newtons and her Faradays and her Maxwells who have made England what she is?

I would not detract from our public educational system, but I think attention must be directed to the task of superposing upon it something which it now lacks, and which European educational systems do not lack in any such degree.

Particularly in engineering education have we focussed attention upon *quantity rather than quality*. Unlike law and medicine, the standard engineering course has remained a four-year course

instead of a six- or a seven-year course. Again, the teaching of the details of industrial operations has crowded out to an ever-increasing extent thoro training in the fundamentals, that is, in mathematics, in physics, and in chemistry. The old four-year engineering course may do for the routine operating engineer, but it will not do for the creative engineer. If he is to compete on equal terms with his British, French, or German comrade, he must get, in his undergraduate course, a more thoro training than he now gets, primarily in mathematics and secondarily in physics and chemistry, and he must then do Ph.D work in a university, or else he must get the equivalent training thru additions made to the curriculum of the technical school. Perhaps the former is the better solution; but in any case if we are to keep our place in the forefront of the nations, it is imperative that we find a better way than we seem to have yet discovered for selecting and intensively training men who have the capacity to become the world's leaders in science and its applications to industry, for if anything has been demonstrated by the history of the last hundred years it is that that nation which is foremost in ferreting out nature's secrets and in applying them to her industry and her commerce will be the world's leader and teacher in practically all lines of human effort. The problem which Dean Pound has just referred to as the age-long problem of mankind, namely that of finding how to make the world's goods go around, despite its great importance, is not the most vital of our modern problems. It is another problem which must command at least some of the finest brains which this world can produce, a problem which, with suitable selection of brains and suitable training, the scientist and the engineer together will solve. It is the problem of the creation of enough to go around. The total possibilities of improvement by finding some new mode of distribution are exceedingly limited, while the possibilities in the matter of creation of new wealth are well nigh infinite and no price is too much to pay for the selection and the training of the men who have the capacity to realize them.

So far our immense supply of easily accessible wealth has made us the most prosperous and the happiest country in the world. We were producing before the war from two to five times as much per man-hour in practically all lines of industry as were European nations, and the common man, the unskilled laborer in this country, was receiving from two to five times as much for his labor in actual purchasing power. The parallelism in the figures is not accidental. We had no better mode of distribution of wealth than had other

countries. *Our labor received more because it produced more, and in just about the proportion in which it produced more.* The inequalities in distribution are glaring enough and they need remedying, but they are of very much less general significance than they seem to be to the superficial observer. If we are to maintain our prosperity and increase it, there is in the long run but one way in which we can do it, namely *by maintaining and increasing our production.*

But our easily accessible wealth, our timber, our surface coal, our oil, our most accessible iron and copper are disappearing. There is but one way in which our prosperity may be maintained, namely, by growing the brains which can devise new processes, discover new sources of energy, make the desert a garden, conserve human life, and teach the rational control of population. These results cannot be brought about by superficial scientific and engineering education. Such problems require the most careful selection and the most thoro training of our creative men which we can devise. The big need in American professional education today is for *a better means than we now have of selecting and training the exceptional man.*

SPIRITUAL FRONTIERSMEN

Francis John McConnell was born at Trinway, Ohio, on August 18, 1871. He received a bachelor of arts degree at Ohio Wesleyan in 1894, the bachelor of sacred theology degree at Boston University in 1897, and the doctor of philosophy degree, Boston University, in 1899. Ohio Wesleyan conferred the D.D. degree on him in 1905; Hanover College the LL.D., and Wesleyan University (Middletown, Connecticut) the LL.D., in 1909. He entered the ministry of the Methodist Episcopal Church in 1894 as pastor at West Chelmsford, Mass., where he remained for three years, going in 1897 to Newton Upper Falls, Mass. Later pastorates included Ipswich, Mass., 1899-1902; Harvard Street, Cambridge, Mass., 1902-3; New York Avenue, Brooklyn, 1903-9. In the latter year he became president of DePauw University and in 1912 he was elected a bishop in the Methodist church. His writings include the *Divine Immanence*, *Religious Certainty*, *Christian Focus*, *The Increase of Faith*, *Personal Christianity*, *Understanding the Scriptures*, *Democratic Christianity*, and *Public Opinion and Theology*. Bishop McConnell was president of the Religious Education Association in 1916.

SPIRITUAL FRONTIERSMEN

By FRANCIS JOHN McCONNELL

THE MEN who founded this university may in a real sense be called spiritual frontiersmen. It is the merest commonplace, of course, that the institution was founded upon the frontier at a time when there was hardly anything to suggest the possibility of material wealth of civilization which has more recently appeared. The more we know of the old frontier conditions, the more we realize their indescribable hardness. The battle with the forest and the swamp was so intense that the spiritual values were likely to be left to one side, not by choice, but by the inexorable working of a desperate fate. We make much of the democracy of the frontier, but that democracy was extremely individualistic. The motto had to be, Everyone for himself and the devil take the hindmost. To prevent the stern conditions of life from killing off the nobler capacities of human nature, and to encourage reflection upon the humaner and finer aspects of life, the founders of universities like this gave themselves to an earnest endeavor to keep alive in frontier conditions an interest in the human ideals of the finer spiritual quality.

The old type of frontier has passed away. Not for thirty years in our country has it been possible to acquire new land just by moving west and taking physical possession of the land. The tides of the frontier migratory movement of the old sort have come to a full stop. Processes of social sedimentation are taking place, and the problems of the frontier are not those of the conquest of forests and swamps. There are frontier conditions, however, and in those conditions the struggle is just as fierce as ever. Everyone knows that upon a frontier which lacked educational and spiritual re-enforcement the law of stern might soon gained sway. The "bad man" of the early days of the West stormed thru his boisterous career simply because he knew nothing but the rough conditions of the pioneer life. The frontiers today are not in the forest, but in industry, and in the realm of international relationships, and in the field of racial contacts.

We say that there are frontier conditions in these spheres because the spheres are not yet conquered by civilizing—to say nothing of Christianizing—forces. Men are finding their way along

as best they can, and too often success goes to him of greatest brute force. The alignment of classes in industry is a new problem; so also is the field of international adjustment; and racial relationships are in the most rudimentary stage.

One of the great opportunities before educational leaders today is that of holding on high the human ideals before the contestants in the industrial struggle. I am not advocating any social panacea as a solvent for industrial unrest. It is absolutely necessary, however, to bring the three parties in any industrial situation—namely, the employers, and the employed, and the general public—to see that no system ought to expect the support of the educated man if that system does not keep the human values on high. The most important question to be asked of an industry is as to the kind of man it turns out. The most important question to be asked of an organization of workers concerns the quality of the human character fostered by the organization. The most important question to be asked about the attitude of the general public at a time of industrial crisis is whether that general public thinks most of its own convenience or of the welfare of the men engaged in the industry. The one temptation of all parties in an industrial strife is that of getting away from the simple, human considerations.

Of these three parties it must today be said in all fairness that the workers themselves, mistaken as they may now and again be in calling strikes, and in conducting strikes, have the keener sense of the human values. Capitalism is notoriously dull in this respect. In the great steel strike of last year a worker protested that he was striking for a chance to get acquainted with his twelve-year-old daughter. He insisted that within a few weeks he had buried a daughter of fourteen years. As he stood by her grave the bitterest reflection was that he had not known his daughter. The twelve-hour day and the twenty-four hour shift had so worked that it had been impossible for him to become acquainted with her. He was striking, he said, for an eight-hour day in order that he might become acquainted with his other child. When this case was reported to a steel magnate, he replied, "The case is very exceptional", but with fifty-two per cent of the men in his entire industry on the twelve-hour basis the only exceptional feature in the incident was the fact that this man's fourteen-year-old child died and was buried on a particular day. As for the general public, its thought is so much of its own convenience that nothing else weighs very heavily. The outlook is dark, not because the problems are intellectually insoluble, but because it is so hard to get the masses of the people,

out of whose thought the great movements of public opinion come, to see the problem in its simpler, more human elements. If our forefathers sacrificed to the utmost to found institutions in which the rigors of a frontier condition could be ennobled by the virtues which are essentially human, we, the descendants of those old-time pioneers, can well give ourselves to most earnest endeavor to bring into the struggles of today—just as desperate as those of the frontier—the same regard for the lofty spiritual ideals.

The second frontier field is that of the international relationships. It is not cynicism, but sober fact, to say that, apart from the efforts of individual statesmen here and there, no serious attempt has ever been made to organize on a large scale a public opinion which would attempt to deal with international questions in a distinctively human fashion. In spite of nineteen centuries of progress, Christianity itself has never yet reached a state where as a matter of actual fact it could be depended upon to prevent war. To say that Christianity has never been tried on a large scale in international relationships is to concede the whole point at issue. We have not yet got beyond a comparatively narrow limit of strictly personal relationship as comprising the essential ethics of Christianity. With 7,500,000 of the best of the young men "battle-dead" since July, 1914, with the nations of the earth at this moment in fearful competition to find deadlier gases and bombing machines, we need not dwell much on the unrationalized and unmoralized condition of the field of internationalism. Now the way out is not so much by the codification of international laws, or by the perfection of the technique of diplomacy, as by emphasis on a few fundamentals which any educated man of normally Christian ideals recognizes at once. For example, there is no contradiction in private life between a man's respect for himself and his respect for his neighbor,—no contradiction between a man's love for his own family and his regard for other families. Is it not preposterous that as soon as we approach the realm of international contacts, whole-hearted respect for the rights and virtues of other nations should seem to be an enfeeblement or an impairment of one's patriotic regard for one's own country? Is any one nation the only one that can have a manifest destiny? Are not all the nations called each of them to distinctive excellence of development at the same time that they dwell in perfect peace with one another? Is the survival of type that comes if nations coöperate with one another in friendly tasks any less significant than the survival that comes as the nations leap at one another's throats? The survival of the fittest between warring

nations can only mean that large numbers of the most fit in each and every nation are killed off, leaving any forward movement of the surviving groups to be carried on by those who survive not because they have superior might, but because they have not been strong enough to be sent forward to the fighting line.

We are all deeply concerned as to the possibility of the organization of a league of nations. I am talking, however, of something deeper. I am thinking of the spirit with which the various nations take their seats around the council table. Suppose they come with guns in their hands, or suppose they come equipped with the old-fashioned sinister diplomacy,—of what value will the league of nations be? Of what use will the league of nations be, founded upon a world system of competitive imperialism? The question answers itself. The only remedy is to see the problem in its human terms. We are dealing not with mere abstract masses, or with nations as such, or with markets. We are dealing with men, women, and children. As long as statesmanship refuses to think of the problem in these human elements, our sorrows will abound. The great universities of the world have all been founded not with the idea of merely putting better instruments into the hands of the rising generation, but with the purpose of teaching the rising generation the spirit in which any and all instruments of civilization are to be used. This is the only way out,—to see the worth of men as men and to stand against any sort of industrial or political doctrine that would treat men as other than men. We abhor an industrial system which in any way robs men of the distinct values of their own personal life. We object to hearing men spoken of as a labor market, and we do not like to hear them referred to as "hands". Much more do we object to seeing national imperialistic policies founded on calculations of man-power available for use in warfare. The curse of war is that, whether we speak of men as cannon-fodder or not, we think of them in war not as fathers or sons or brothers or neighbors, or even as separate persons. They inevitably become parts of a machine. If anything suggestive of quick and vigorous personality survives, the survival is in spite of the machine and not because of it. I am not a pacifist. I would vote for any war which might seem to be really righteous. And yet even in such case the simple fact would be that war is a materializing, vulgarizing, and brutalizing business.

The third pioneer field is that of the realm of racial contacts. It is possible that enough of humane spirit may soon come to the leading nations of Christendom to prevent their attacking one

another in war. A still greater triumph—one which seems at present far distant—would be such a conquest of racial prejudice and such mastery of the tendencies to consciousness of racial superiority as to prevent clashes between the peoples of different color, or between the so-called more favored nations and the so-called less favored nations. Even if we could bring the nations which we now speak of as Christian into a real spirit of brotherhood—and this brotherhood could find outward expression in a satisfactory organization—we would still have left the problem of the relation of these nations to the nations which we call non-Christian. With a consciousness of racial superiority there almost always goes something of the spirit of the bully—the bully being none the less a bully because he cloaks his bullyings in pious phrases, and makes much of the good he is doing to those whom he bullies. The contact of the so-called Christian nations with the so-called non-Christian nations has thus far been one long horror, with only a few bright spots here and there to suggest any sort of mitigation. He would be a superficial student of history who would say that even the course of the Spanish conquerors in the West Indies, for example, had been one of deliberate cruelty. Always was there the mixture of motives. The tragedy is that such motives as that of personal and national gain on the one hand, and that of devotion to the church and the kingdom of heaven on the other, could ever have been brought to mix. We are dealing here with one of those fundamental problems of human nature with which only trained Christianity can adequately cope. We need a revival of religion which will not only quicken the inner fires, but will spread those fires to a class of problems which we have too often thought of as lying outside of Christianity. If moral progress consists partly in bringing more and more persons within the realm of our obligations, Christian internationalism also consists in bringing more and more nations within the realm of the possible application of Christian principles.

One lesson which the war has taught us has not yet been sufficiently emphasized, namely, the fact that many nations outside of what we call civilization have measured up to our standards of conduct and character quite as excellently as have we ourselves. The ideals of the soldier's life may not of themselves be the best, but within the past five years we have greatly exalted these ideals. Judged by these ideals of unflinching courage in the midst of personal danger, unyielding pertinacity in the midst of long strains upon vitality, unconquerable optimism in drudgery, the so-called non-Christian peoples have been just as worthy as ourselves. Black

men from equatorial Africa have proved themselves just as good as white men from France. Yellow men from China, and Hindus from India, and negroes from the southern states of America, have met the supreme tests with just as much credit to themselves as have white men from England and the United States.

At one of the darkest moments of the war, in the spring of 1918, I was much struck by an incident related to me by a worker on the western front in France. Asked what was the bravest single feat of the war, one who had been for four years upon the English battle line replied: "The bravest thing I personally know of was the exploit of a Hindu in carrying to the rear the body of an English officer killed in No Man's Land. The Hindu placed himself at the side of an Englishman just as the Englishman was about to lead his troops over the top on a raid. Ordered to go back, the Hindu said: 'I cannot go back, and be a true Hindu; the law of the Hindu is that a Hindu must stand at the side of anyone who has aided his family when that benefactor is in danger, to render any possible service in case of injury or death. In the old days in India this officer's family befriended mine. I shall go over the top with him, in obedience to the Hindu law.' And over the top went the Hindu with the Englishman, and back thru the trenches he carried the dead body of the Englishman a few minutes later." The Tommies who saw it all commented on it in this sententious fashion: "Pretty good human stuff,—the Hindu."

Pretty good human stuff! That must be said of all the so-called less favored peoples, if they have any chance at all. Pretty good human stuff! That means that the emphasis has to be less upon rubber and upon oil fields and coal deposits, and more upon fair dealing with the human stuff. It may be that the Hindus, who to the number of over a million fought on the western front, have not yet arrived at the state of fitness for democracy. It is perfectly certain, however, that they have gone beyond the stage of any legitimate exploitation. They were never intended for exploitation. The message of any enlightened and Christian education is that a worthwhile spiritual ideal will always look upon men in whatever nation as men and will look upon the more favored nations as trustees of civilization, the civilization to be used to the uplift of the less favored.

Let us not deceive ourselves. Nothing but the holding on high of the spiritual and human ideals will ever solve the problem that confronts us. The only way to counteract the earthward pull of the downward tendencies of industrial and national and racial selfishness is for men to hold the essentially Christian notions of human

ity on high. Let us not be deluded by any declaration that this is academic or unreal. The so-called practical men, the hard-headed business men, have in the past few years shown themselves utterly unable to solve these problems on the basis of merely practical precepts. The man whose dealing is with materials thinks that emphasis on material and use of material, of force—in other words—will check the tendencies to industrial unrest. He blusters with threats against the labor world, and calls upon governments to stamp out economic and social heresies. The result is that the reactionaries become responsible for the spread of more so-called Red spirit than all the agitators combined. On the other hand, the man who takes his intellectual training as a fine thing to be enjoyed in itself, apart from any great human interest to be observed, gravitates naturally to the thought and practice of those who hold the privileged seats. A cynical social student some time ago remarked that a union of the intellectual forces with the struggling industrial classes is not possible simply because the intellectuals long too eagerly for the delights of fine society and the bright chit-chat of social functions. This is indeed cynicism, rather than accurate description, for the really educated are the last ones likely to forget the worth of men as such. The days of strenuous adventure are not over. Hard as were the hardships of the pioneers of the early day, the hardships of the intellectual and spiritual adventurers are more grievous still. It will be remembered that when Daniel Boone, one of the greatest of our pioneer frontiersmen, was asked if he had ever been lost, he replied that he never had, but that he had once been bewildered for three days! Anyone who ventures out into the tangle of the social frontiers will have to run the risk, if not of being lost, at least of being bewildered for much more than three days. And yet the north star is always in the north, and the east is always east. Actual schemes of social and national reconstruction must proceed under the guidance of cool-headed social engineers. The guiding principles, however, of regard for certain elementary human values must never be lost sight of.

Is it not Rudyard Kipling who has told us in a striking poem of the unrest of the pioneers who always felt that there was something lost beyond the next range of mountains, and that they must go forth to find that something? Certainly the pioneers searched as for lost treasures. In the fields of which I have been speaking there is always danger of the greatest of losses, the loss of the fundamental ideals of what human life should be, and the funda-

mental understanding of what life really is. It is for these that the spiritual frontiersman is forever to seek.

I once heard an avowed Socialist speaking on a Wall street corner at noontime. For a while his speech was dreary and uninteresting. He was trying somewhat vainly to explain Marx's theory of surplus value to a crowd of passers-by. But suddenly he changed the course of his speech. He coolly recited what men were asked to do in certain mining and manufacturing districts in the United States. After the recital he quietly asked, Ought men ever to be asked to do such things? Then he told of the demands upon women in certain industries, closing with the same quiet question, Ought women ever be asked to do such things? Once again he described the child labor situation in the country, and asked, Ought children ever be asked to do such things? I have never been able to bring myself to accept the Marxian theory of surplus values, either as expounded by the street-corner orator or by Marx himself. On the other hand, I have never been able to get away from that triple question of the street corner about what should be asked of men or women or children. Industry must be judged by what it does to men and women and children. Internationalism must be judged by its effect on men and women and children. The racial contacts are in their last analysis problems of men and women and children.

I stand before you as in a way a representative of the Christian church. May I say that I can find no contradiction between the ideals which I have been trying to utter to you and the ideals of Christianity? More and more the scholars are making it clear to us that away back at the very beginning—in the Judaism out of which Christianity came—was an elementary emphasis on the dignity of human life as such which is quite as remarkable as the ideal of God which was set forth by the Hebrew seers. In fact the ideal of God and the ideal for man seemed in the Old Testament times to work back and forth in mutual re-enforcement. The Hebrews no sooner found a worthier ideal for man than they made it binding on God also. And they no sooner discovered a worthier conception of God than they taught it as a guiding principle for human conduct. In the life of Jesus, in which the ideal of God and the ideal of man is so marvelously blended, we find as complete an emphasis upon mastering the right thought concerning man as upon mastering the true thought concerning God. In fact, Jesus seems to have been sterner in dealing with those who took a wrong attitude toward man, than even with those who took a wrong attitude toward God. If a man made a theological mistake concerning God, Jesus seemed to find it

very easy to forgive him. But if a man made a mistake in his essential and underlying thought of his fellow-man, Jesus spoke with a sternness at times rushing on into invective. The sin of the rich man in the parable was not the sin of gross evil in character. It was the sin of a practical heresy toward the beggar at the gate. The test by which eternal issues as to character are settled is, according to the gospel judgment, the test as to whether one has or has not met the simple human requirements of the earthly human existence.

I said in the beginning that the old-time democracy of the frontier was individualistic. If one in those days did not like the neighbor, one could move on. With the passing of the frontier in the old sense, the population is becoming more congested. One cannot rid one's self of one's neighbors simply by moving on. We must come to some sort of adjustment with the neighbor, and with the ends of the earth crowding in closely upon one another, the nations are nearer neighbors than ever before. And the so-called backward people stand at our very doors. Yet after all is it an insoluble problem? Is it not just the age-old problem of living together? If it is, however, the problem of living together, we shall find that we cannot long live together except on some basis of assumption as to what we are and as to what our neighbors are. No other assumption can we safely make, than that which the highest Christian scholarship always holds before us, that men are to be treated always as men, because of their inherent worth as men and because of the infinite possibilities of humanity, as humanity is looked upon by those far-seeing prophets who gaze out even beyond all frontiers toward the reaches of the eternal.

THE SPIRITUAL IDEA OF THE UNIVERSITY

Sir Robert Alexander Falconer, Knight Commander of St. Michael and St. George, was born at Charlottetown, Prince Edward Island, February 10, 1867. As a boy he spent eight years at Trinidad, British West Indies, and attended Queen's Royal College School. In 1885 he took the Gilchrist scholarship and graduated with an A.B. degree from London, 1888. At the University of Edinburgh he received the A.M. degree in 1889, the B.D. in 1892, the Litt.D. in 1902. The following universities have conferred the LL.D. degree on him: Glasgow, Princeton, Pennsylvania, Michigan, Western Reserve, Northwestern, Toronto, and other Canadian universities. He also holds a D.D. degree, is a Companion of St. Michael and St. George, and a Fellow of the Royal Society of Canada. In 1892 he became lecturer and professor of New Testament Greek in Pine Hill College, Halifax, Nova Scotia, and principal in 1904. In 1907 he became president of the University of Toronto. His publications consist chiefly of articles in professional journals, in encyclopedias and dictionaries in Britain and America, in magazines on educational and public questions, and *The German Tragedy and Its Meaning for Canada*, and *Idealism in National Character*. He is Canadian editor of Nelson's *Encyclopedia*.

THE SPIRITUAL IDEA OF THE UNIVERSITY

By SIR ROBERT ALEXANDER FALCONER

ONE HUNDRED YEARS seem to us whose lot has been cast in the newer parts of this continent to be a long period, and a university which celebrates its centenary is relatively old, but tho the local institution is old, and the graduates of this university are to be congratulated on the years and glory of their Alma Mater, a sense of antiquity and transmitted respect invests even young institutions in this New World. They are the advanced posts of an ancient and royal (if you will bear with this word for history's sake) commonwealth, and are entitled to wear the crest of the noblest intellectual lineage of the world. The university like the church is a universal institution of our Western civilization, which in idea is spiritual but takes concrete forms that vary with age, nationality, and local habitation.

We must not, therefore, look to our creations in this New World as tho they were unique. It is true that in each of these new universities experiments are being made to suit local necessities, but their *raison d'être* is a recognizable spiritual idea ever the same everywhere which gives our newest ventures the right to this august designation. The university is not made by a congeries of professional schools, such as medicine, law, engineering, dentistry, agriculture, grouped into an administrative unity. These all may be held together and directed by one board of trustees, and still remain nothing but a group of professional schools—concentrated it is true in one spot, but nothing more than technical training-places for the turning out of men and women who will know enough to make a living by the practice of the skill which they have in part acquired in these places.

It is vital to remember two facts: that these accompanying elements of a university are *professional* schools or faculties, and that they are integral parts of and receive their character from the university. We may doubt indeed whether there could be professions without universities, and one of the main functions of the university is to qualify for the professions. Let us linger for a moment upon that word "profession". It has a noble meaning. A profession involves more than technical skill: it is based on broad knowledge—

not simply on exact acquaintance with the facts necessary for practice, as for example the few facts about the bones that the skillful bone-setter requires, or the rudiments about drugs or simples that an old-fashioned doctor was content with—nor the skill of mere manual dexterity or experience that by years of repetition has embodied itself in the instinct which is the guide of the middle-aged. Broad knowledge of science and human character lies at the foundation of the education which prepares for the professions. But more than that, the member of a genuine profession is by ancient lineage the servant of the people. The three primary professions, as far as age goes, the church, law, and physic, have this in common that they are all recognized by the state as being intrusted with great public responsibilities. The mediaeval conception of the clergy took its professed ideal from the motto of the popes—*Servus servorum Dei*; the law finds its supreme embodiment in the judge who is set apart and surrounded by especial dignity for the maintenance of justice and order; and the medical man goes back to Hippocrates for the oath in which he pays fealty to his profession—“equally free from the mysticism of a priesthood and the vulgar pretensions of a mercenary craft”. This idea of vocation to public service is essential to the conception of a profession, and no school which does not instil into its graduating students this spirit has a right to be called more than a technical institute. Nor will the multiplication of these schools alter the matter one whit, for size and numbers have nothing whatever to do with it. If the professional school is worthy to be called a faculty of a university, it must be because it is a faculty and not a technical school.

The word “faculty” also is a dignified term. It denotes a body of persons on whom specific professional powers have been conferred. They derive their authorization from above, because they are recognized as competent to maintain and create the spirit and ideals of the profession. They are not a private group of self-constituted practitioners, but a recognized body of people who have been granted authority both to teach and to certify that those whom they have taught are fit and proper persons to receive a degree at the hands of the superior body like the university, to which there has been delegated by the state the power to confer the degree.

We may now return to the idea of the university itself. As I said at the opening, the university is one of the great historical institutions of Western civilization which remains the same in essence wherever it may find local habitation. In our New World we are too often inclined to forget that by origin and lineage we are

of old stock, and that our fathers brought to this New World most of the ideas in germ which have developed and changed somewhat by reason of the new soil and atmosphere in which they have grown. Nor must we assume that the changes are always for the better. Often they are, generally they suit our needs, but it may be that they have arisen at times simply thru our taking the easier way in order to meet emergent demands, and that we have for a season forgotten the idea itself in which the vitality of the institution is embedded. It is therefore not out of place for us on such an occasion as this to take a brief survey of the history of the most ancient and one of the greatest of the universities of the world, the University of Paris. Here if anywhere we may get an insight into the idea of a university, because tho today great professional schools are ranged round it, its history has been full of vicissitudes and of errors not unlike those which endanger our flourishing universities in this New World.

What I have to say is taken from an authoritative recent book called *La vie universitaire a Paris*. I shall not linger over the misty period of origins when the university began to take shape in different colleges, but shall begin with the thirteenth century when "the university was a centre of extraordinary intellectual life, and enjoyed such an incomparable prestige and moral authority that both civil and ecclesiastical powers had to reckon with it". The secret of this influencelay in the wonderfully developed training that was given at that time by the practice of dialectic, not as a matter of mere form and static laws, but as a vital method of dealing with universal human problems of man's being, beliefs, and conduct. It was an age of *faith* in that men were profoundly concerned in the things of the human spirit, and this intensity throbbing in the body of the university made its life. Strange tho it may appear, "with the advent of the Renaissance the university fell into decadence for several centuries". In its place came the schools of the Jesuits, who were great teachers and introduced a new method, supplanting dialectic with the study of the ancient languages. In their judgment the cultivation of the taste thru the return to classical antiquity was the essential purpose of intellectual education. This method reached its completion in a perfected dialectic. Beyond this, however, they could not go, tho their finished product was one of the factors that has entered into the making of the French mind of today, and their idea of the function of education persisted even until the University of Paris was being revived at the beginning of the nineteenth century. The first fruit of this

method is what the French call *Finesse*, a word which "since the time of Pascal is sometimes called taste, sometimes psychological sensibility, sometimes a delicate intuition which warns one of a point where logic loses its rights"—a spirit of shading and moderation the characteristics of the *honnête homme*, or gentleman who was polished and refined by Latin oratory, some philosophy, and even some mathematics. But during the reign of the Jesuits the university itself was under eclipse. There was no genuine intellectual vigour, and tho science was making headway in the world, it was thru individuals, not in the schools. Thruout the great period of the seventeenth century the university counted for little. Descartes wrote and influenced not the schools but the world of thinkers outside.

At this time when the University of Paris was not a teaching body and had all but disappeared, "medicine, law, and theology were merely professional schools without any ideal". It may be said that the situation was saved by the creation in 1530 by Francis I of the Collège de France. It prepared for no examination and until today is subject to no program. Its teachers, men who are called because of their learning or their powers of research, are allowed full freedom for original work, and they offer those who wish to listen or attend the advantages of their newest discoveries in knowledge.

With the advent of the Revolution science was eagerly pursued, but for its practical applications, strange to say, and many individual schools sprang up which, however, were narrowly specialized. Napoleon, moreover, turned the faculties of science and arts into mere examining bodies composed of the teachers from neighbouring lycées. "What was wanting were great and powerful scientific workshops where thru teachers and students the work of science could be carried on in a collective and unbroken manner."

We pass over nearly a century of political sunshine and storm until France went down to military defeat in 1870. But then began a triumph in spirit over her disaster thru her universities. Intellectual ardor blazed forth. The professional schools were brought together so that by their concentration a common intellectual life would flourish, as the idea of the university again penetrated them. Their leaders had learned that "to provide the mind with the taste for large things we must give it wide horizons, and in the university, a truly encyclopedic school, keep it from narrow specialization".

Now for the first time for centuries by the rise of the historic

spirit the faculty of arts or letters resumed its rightful place in the university.

Its aim is to study the intellectual and moral life of humanity in the world in which this life is manifested under the most general and complete forms. Its proper domain is consequently *literature* in the largest sense of the word; *art* in so far as it expresses ideal life; *philosophy* which synthesizes the conceptions of thought; *history* which is the picture of social life; *geography* which describes its theater. Its method is scientific and literary.

In the faculty of science the pursuit is made not in love of an erudition which is self-enclosed, which is an end in itself and never reaches general ideas. On the other hand, it has great distrust for syntheses, which end in vast systems, in logical constructions as imposing as hazardous. It likes to keep to a middle course, in which the details can be seen with precision, and in which nevertheless a horizon can be found broad enough so that one need not be stifled. It will sacrifice neither erudition nor taste; neither exact knowledge nor the thought which illuminates knowledge.

From this brief outline of the history of the University of Paris, taken from a description made by some of those who know most about its essential nature, it is evident that the vicissitudes of its career, traced in curves now almost disappearing and again ascending rapidly, are due to the vitality or the temporary dormancy of the spiritual principle. And if we were to turn to Oxford and to Cambridge this same truth might in them also be illustrated, that their periods of greatest influence were those in which the spiritual element was vital within them. They have never been like Paris renowned for their professional schools. Their "schools" have been different and each College has had its own individuality. But still it is true that they lived most when they were awake to the reality of things spiritual.

Probably I cannot find a better delineation of the ideal of Oxford University in the nineteenth century than that given by John Henry Newman, who was one of its most distinctive products, and one of its greatest ornaments. What he says is of course an ideal, and it bears the limitations of his own mind, but it is nevertheless a fine exposition of the aims of an historic university.

If a practical end must be assigned to a university course I say it is that of training good members for society. Its art is the art of social life, and its end is fitness for the world. It neither confines its views to particular professions on the one hand, nor creates heroes or inspires genius on the other. A university training is the great ordinary means to a great but ordinary end: it aims at raising the intellectual tone of society, at cultivating the public mind, at purifying the national taste, at supplying true principles to popular enthusiasm and fixed aims to popular aspiration, at giving enlargement and sobriety to the ideas of the age, at facilitating the exercise of political power, and refining the intercourse of

private life. It is the education which gives a man a clear conscious view of his own opinions and judgments, a truth in developing them, an eloquence in expressing them, and a force in urging them. It teaches him to see things as they are, to go right to the point, to disentangle a skein of thought, to detect what is sophistical, and to discard what is irrelevant. It prepares him to fill any post with credit and to master any subject with facility. It shows him how to accommodate himself to others, how to throw himself into their state of mind, how to bring before them his own, how to influence them, how to come to an understanding with them, how to bear with them. He is at home in any society, he has common ground with every class; he knows when to speak and when to be silent; he is able to converse, he is able to listen; he can ask a question pertinently, and gain a lesson seasonably, when he has nothing to impart himself; he is ever ready, yet never in the way; he is a pleasant companion and a comrade you can depend upon; he knows when to be serious and when to trifle, and he has a sure tact which enables him to trifle with gracefulness and to be serious with effect. He has the repose of mind which lives in itself, while it lives in the world, and which has resources for its happiness at home, when it cannot go abroad. He has a gift which serves him in public, and supports him in retirement, without which good fortune is but vulgar, and with which failure and disappointment have a charm. (*Idea of University*, p. 177.)

I fancy that in this the great Cardinal is unconsciously taking himself for his model, and not a few touches of autobiography are to be found in the extract. But tho in lofty eloquence he carries us into a region beyond the attainment of ordinary folk, the ideal does depict the spiritual function of a university. I will allow you to estimate each for himself his relative place, in the hope that each will judge his approximation to the standard with due modesty.

But to balance affairs I must take an extract from another great Englishman, who also had a command of fine English but otherwise had little in common with Cardinal Newman; I mean Huxley. He was a severe critic of much in the older universities, tho no one was more eager for the maintenance of a university spirit in all the professions. He was a reformer, not a revolutionist, certainly not an anarchist. Huxley has this to say:

I take it that the whole object of education is, in the first place, to train the faculties of the young in such a manner as to give their possessors the best chance of being happy and useful in their generation; and, in the second place, to furnish them with the most important portions of that immense capitalized experience of the human race which we call knowledge of various kinds. . . . You do not care to make your University a school of manners for the rich; of sports for the athletic; or a hot-bed of high-fed, hypercritical refinement, more destructive to vigour and originality than are starvation and oppression. [This was a shot at Oxford.] . . . In an ideal University as I conceive it, a man should be able to obtain instruction in all forms of knowledge, and discipline in the use of all the methods by which knowledge is obtained. In such a University, the force of living example should fire the student with a noble ambition to emulate the

learning of learned men, and to follow in the footsteps of the explorers of new fields of knowledge. And the very air he breathes should be charged with that enthusiasm for truth, that fanaticism of veracity, which is a greater possession than much learning; a nobler gift than the power of increasing knowledge; by so much greater and nobler than these, as the moral nature of man is greater than the intellectual; for veracity is the heart of morality. (*Science and Education*, pp. 174, 202, 204.)

These great Englishmen, so unlike in almost everything, are alike in this that they magnify the function of the university as producing a certain *ethos* or character in its students. For them it is not a mere congeries of professional schools, chiefly technical with an arts college in the center. The spirit that should be the soul of the arts faculty is to pervade all the others, and is not primarily a matter of knowledge, for, as Newman says, "The university teaches men to see things as they are, to go right to the point, to disentangle a skein of thought, to detect what is sophistical, to discard what is irrelevant." Or in the words of Huxley, "The very air he breathes should be charged with that enthusiasm for truth, that fanaticism of veracity, which is a greater possession than much learning." What a fine vigour Huxley's language has—"fanaticism of veracity!" the incisive paradox of a man who would doubtless claim that fanatics had been buzzing round him all his life thru.

Both these men would agree that the function of the university is to produce intelligence of the highest quality, and probably they would also accept the definition of the French critic who says:

Intelligence properly so called is open-mindedness, a sense for seeing things just as they are, the talent for comprehending the fact of reality and of discerning relative purposes. In social relations we call it Tact, in literature it is designated taste, in science it is criticism. A sense of proportion . . . confidence in ideas regulated by a sense of reality.

The production of such an intelligence is a most noble aim, but nothing less than this lies at the center of the spiritual life, which is the soul of a true university. And never was it more needed than today in our enormous state universities of this continent which are growing, it seems often, more by accumulation than by organic development from the center of the old arts faculty with its university spirit. Fundamentally we must remember that the university in all its branches deals primarily with *persons* who are to become equipped for their professions—that its chief concern is not curricula or courses which are to be imposed upon absorbent organisms. As I have already remarked, it is for professions that students are being educated in the practical schools of the university, and a profession

involves definite ethical qualities in the person who is to practice it. What is generally called culture—at least some measure of it—is a requisite in any person who is to be a worthy member of a profession. This is I am afraid just where we are in danger in our New World. We are turning out experts in medical and surgical knowledge, in the sciences of physiology and pathology, in the technique of anatomy and surgery; but what about the refined judgment of the man who will use this expert knowledge so as to become a safe and broad-minded practitioner and a wise leader in society? We are educating men who understand the physics of engineering, of the strains and stresses, the chemistry of metallurgy and even of sanitation, but what about “the passion for veracity which is the heart of morality”, which wins for a great engineer the trust of all for whom he performs professional duties, whether employer or employed? If our universities are to grow more complex and increase in size it will become an ever more difficult but even more important task, to pervade the newer faculties and departments with the spiritual aims which historically belong to the university, and without which it would lose its right to its name and become a mere agglomeration of professional schools. Possibly if Newman were to visit the state universities in this New World he would abandon hope of his ideal, but Huxley, as shown by his vigorous addresses at the opening of Johns Hopkins University in 1876, would not. Huxley might be downright critical of us but he would be hopeful nevertheless, because he would see that science is being better taught every year. He might also remember the story of the French university, how a new spirit transformed Paris in the nineteenth century, until today its professional schools, having imbibed the genuine university spirit, are incorporated into a great institution in which knowledge is accumulated, sifted, and diffused. And if Paris had its years of unidealism but triumphed over them, why may not we, who have a magnificent inheritance and have so much to be proud of, be optimistic about our own future? Of course France is a small country and it has had a long civilization. But we do not expect results to follow in a day. The process will be tedious for us, and the universities can by no means produce the results alone. They must build upon a finer education in the schools, for all education is one. Years spent in the moulding period of youth under fine-grained teachers are as determinative as the four or five years spent in a university.

But there is further good hope for our future: The quality of our people is such that they will be responsive to any spiritual leader-

ship that the universities may give them. They possess fundamentally a fine idealism and are not sold over completely to the material. Indeed, they expect from the universities just the kind of product that it has always been their boast that they should produce. They do not want selfish practitioners who convert their profession into a trade. They expect us to send them men and women who will be good members of society, and that too not because as engineers or surgeons they are skilful as carpenters are skilful, thereby performing a parallel function for the community, but because they have highly developed minds and spirits, sensitive and sympathetic to all that concerns the health and social welfare of the society in which they move—to say nothing of the interest they ought to add to life, the amenity they should contribute to their circle by their appreciation of knowledge, and of beauty in morals or art. Thru the multitudes of graduates who each summer are certified to the world as fit and proper persons to wear the degrees of the university, the general taste of the public must surely be raised and its judgment be educated. They ought to be like the warm airs of spring that sweep over the well tilled earth and bring to fruition many of the common virtues that lie latent as seeds in the hearts of average folk. Instead of that how many a mere expert, finely trained I grant you, is like a magnificent iceberg dazzling to the eye, but feared because of the fog of suspicion and self-interest that he so often creates. He chills the atmosphere and in time disappears, to the happiness of everyone, in his own cold environment.

I have treated the term "spiritual" in a very broad way, but I believe that this is essentially the true way of applying it in the theme which has been assigned to me. Of course the highest concept of the spiritual must include religion, but I do not intend to dwell upon the influence of universities on religion, except to say that I believe that true religion is bound in the long run to profit by the intensification of the genuine spiritual aim of university education, as I have defined it, because veracity is the primary virtue of religion. Where the right attitude of mind exists error of any kind will gradually cease and truth will prevail, and therefore genuine religion flourish. Jesus Himself said that the only sin that could not be forgiven was the sin against the Holy Spirit, i.e. the sin of the perverted will that deliberately calls good evil and evil good; it is not a sin of knowledge but of the moral character and of an untruthful mind. Fortunately, the youth of the present day have been accustomed to an atmosphere in which the former controversies of science and religion have withered, and lie like dead leaves only

fluttered into spasmodic movement as some gust of the late autumn disturbs them from the path into which the tramp of human life beats them down.

Let me conclude by a quotation from Bacon, which might be placed by every university as the motto for all who enter its portals:

Truth which onely doth judge itselfe, teacheth that the inquirie of truth which is the love-making or wooing of it; the knowledge of truth which is the presence of it; and the beliefe of truth which is the enjoying of it; is the soveraigne good of human nature.

As I read these sentences they depict for me the stages of the genuine student. First, he comes up eagerly to the university with the highest expectation bent upon "the inquirie of truth which is the love-making or wooing of it". May we always meet him in such a spirit of kindly welcome that his period of love-making will last long and grow increasingly happy. Then there is "the knowledge of truth which is the presence of it". May our teachers retain such fresh and active minds, free from cynicism or indolence that the universities will be discovered by our students to be homes of genuine knowledge, to the stores of which competent investigators are adding every day; also as the undergraduate passes into the graduate stage may he find that he has acquired during his years not only some real knowledge but also the correct methods of procuring more for himself. Finally "the beliefe of truth which is the enjoying of it". What greater blessing can we wish for our university graduate when he reaches the maturity of his education than to be able truthfully to say "I believe"? Much of his knowledge will have been forgotten or proved erroneous, but each year he will have been securing a sense of the reality of things, so will have become steadfast in the belief that there is truth in life, and will enjoy life to the full because he is persuaded that truth is not an airy phantasm, no more real and enduring than the iridescent colors in a cloud that is soon to be swallowed up of night, but is a possession to be enjoyed even to old age. Then will he agree with Bacon that this pursuit of truth is "the soveraigne good of human nature".

THE CENTENNIAL COMMENCEMENT

[The following account of the Centennial commencement was written by Ivy L. Chamness, '06, editor of University publications, for the July, 1920, issue of the *Indiana University Alumni Quarterly*. The addresses delivered on commencement day are included.]

THE CENTENNIAL COMMENCEMENT

THE FIRST CENTENNIAL COMMENCEMENT of Indiana University has passed into history. Gala week festivities, covering more than the usual number of days, began with the baccalaureate address on Sunday evening, May 30, and closed with the ninety-first annual commencement on June 4. The week was crowded full of interesting events, in which there participated more alumni than ever before returned for the graduating exercises of their Alma Mater. Everyone was happy to be here, and in the joy of meeting old friends and of seeing the campus again, forgot even such absorbing topics as the league of nations, the high cost of living, and the political conventions. The campus was lovely, as always, and the weather on most days favorable.

The baccalaureate address, held in Assembly Hall instead of the campus amphitheater because of rain, was delivered by Allan B. Philputt, '80, pastor of the Central Christian Church of Indianapolis, and formerly a member of the University faculty. He took for his text Isaiah 30:31, "And thine ears shall hear the word behind thee." Dr. Philputt called attention to the achievements of the past, reminding us that the traces of antiquity are all about us, and that we owe a debt to the past. Speaking of the history of the University, he said that altho the University is now established and need not struggle for existence, there are still problems to be solved. The mission of a university in a democracy is well defined. Education gives insight, poise, courage, and calmness of soul in a world full of hard problems. It is no longer a luxury, the prerogative of the rich youth, and a college graduate must not expect to get thru life more easily because he is educated. Rather, he must go to work, for others as well as for himself. Each one should feel a personal responsibility in helping to solve the many serious problems of America today. Those who enjoy the advantages of education should acknowledge a perpetual obligation to society. During the war we were filled with a high idealism; we dreamed of a better world, of the brotherhood of man, of the putting away of false gods. We made vows and felt the joy of united effort in a noble cause. Have we forgotten these vows or did we really intend to keep them? We now lack confidence in each other; we indulge

in levity, recklessness, and wild extravagance, all of which bode ill. The churches and schools must hold fast to principles, altho experiment must come. We should not be bound fast by the past, rather we should use the experience of the past in order that it may give us courage to travel unbroken fields. Do not be stupidly conservative, Dr. Philputt said, but listen to the wisdom of the fathers, go to them for counsel, but return with caution. Make our own blunders perhaps, but do not perpetuate the blunders of the past. Have a care in the clamor for change. Work with the new problems, but go not after false gods. Hold to the faith of the past. Isaiah was not a reactionary, but a seer. Follow men of vision, who see, not visionaries, who imagine. Idealism has been a coat for many crimes, for instance, the soviet in Russia and the Jacobins in France. The better forms of government should be obtained not by a radicalism but by orderly development. The true idealist is a practical man. His feet are on the ground, but they do not lie on the ground. "Where there is no vision the people perish." Labor leaders say and many believe that the public is too indifferent to many wrongs. Society today needs the services of spiritually-minded persons. Even ten righteous men could have saved Sodom from destruction. Our young men helped to save us during the war and they should help to save the country in peace. The Fathers believed education to be a sure fortress of virtue. Leaders for the new day should listen to the voice behind. An ancient proverb says that the truth of life abideth among the wise. In reply to the charge that Christianity has been tried and found wanting, Dr. Philputt declared that Christianity has been found difficult, but has not been tried. The Golden Rule and the Sermon on the Mount must save this broken world.

On Monday, designated as All-University Day, the senior women's breakfast was held in the University cafeteria. Mildred Begeman, '20, the toastmistress, called upon Dean Agnes E. Wells, who urged the women to return in five years to their class reunions, and Anna R. Clark, '15, Y.W.C.A. secretary who is soon to leave for China, who admonished the class to do nothing unworthy of the University. Other responses were made by Emma McClain, Mary Painter, Lorena Ray, Ruth Duncan, Kathleen Moran, and Margaret Cox.

The formal exercises usually connected with the flag raising, ivy and tree planting, and the presentation of the class memorial had to be canceled because of rain, but a flag was given to the University, and the ivy and tree were set out. The class presented to

the University money left from the *Arbutus* to start a fund for a stadium back of the Men's Gymnasium. The rain also prevented the seniors from holding the peace pipe ceremony and the usual exercises at which the class oration and the class poem are delivered. The annual faculty-senior baseball game was postponed until Wednesday forenoon. The band concert and community songfest also had to be canceled because of the condition of Jordan Field. The Alumni Council met during the day in the Faculty Club rooms and framed some recommendations to be proposed to the Indiana University Association of Alumni and Former Students at their meeting on Tuesday. The day closed with the senior play, *What Happened to Jones*, by George Broadhurst, given by members of the class in Assembly Hall, after which an informal reception with dancing was held in the Men's Gymnasium.

On Tuesday, Alumni Day because the state law says that an alumni trustee shall be elected on Tuesday preceding commencement, the alumni met in Assembly Hall to conduct their business session. David E. Beem, '60, presided until Frank Elmer Raschig, '10, the president of the Association, arrived. James William Fesler, '87, the only nominee for alumni trustee, was declared elected.

Humphrey M. Barbour, '15, the alumni secretary, presented the recommendation of the Alumni Council that the dues of the Association be raised to \$2 and that the price of life membership be raised to \$50. This involved the changing of Article VIII of the Association's constitution, which, since the recommendation was passed, now reads: "The dues of the Association shall be two dollars (\$2.00) per year, and all members shall be entitled to receive all publications authorized by the Association. Life membership dues, payable in one or five annual instalments, shall be fifty dollars."

Mr. Barbour also read a recommendation from the Alumni Council that Article V of the constitution be amended to remove an ambiguity. The motion was carried and the section now reads: "The President, Vice-Presidents, Recording Secretary, Treasurer, and Executive Committee of this Association shall be elected by ballot at the annual meeting in June for a period of one year or until their successors are elected and qualify. The alumni secretary shall be appointed by the Alumni Council in conference with the University administration."

A third recommendation of the Alumni Council concerned the financing of the Association, which the Council believed should be put upon an independent financial basis. "To this end it further recommends that the Association now instruct the Alumni Council

to proceed at once to formulate plans for the immediate raising of an adequate endowment fund for the complete financing of the work of the Association." The recommendation was put in the form of a motion and, after discussion, carried. During the discussion the question of the amount of the endowment was raised. It was thought that the alumni office would probably cost \$10,000 or \$12,000 a year, and that an endowment of \$200,000 was necessary to yield this amount. Inasmuch as it would necessarily be some time before this endowment could be raised, it was proposed that sustaining memberships be solicited. Dr. Charles Stoltz, ex-'90, of South Bend, gave \$20 as a start and the following alumni pledged themselves to give \$20 a year for a period of five years: Robert A. Woods, '81, Princeton; Benjamin F. Adams, '83, Bloomington; John H. Bothwell, '69, Sedalia, Mo.; Thurman Van Metre, '10, New York City; Humphrey M. Barbour, '15, Bloomington; John C. Shirk, '81, Brookville; James A. Woodburn, '76, Bloomington; Ulysses H. Smith, '93, Bloomington; Frank Elmer Raschig, '10, Indianapolis; William F. Book, '00, Bloomington; Allan B. Philputt, '80, Indianapolis; James M. Philputt, '85, Eureka, Ill.; David A. Rothrock, '92, Bloomington; Grace M. Philputt, '08, Bloomington; Edna Johnson, '98, Bloomington; Charles Wiggins, '04, Winnipeg, Canada. The following pledged \$10 a year for five years: William H. Wylie, '97, Bloomington; J. Harold Warner, '15, South Bend; William A. Rawles, '84, Bloomington; Daniel T. Weir, '91, Indianapolis.

Election of officers resulted as follows: Andrew J. Rogers, '10, Indianapolis, president; Mrs. Prudence Arnott Craig, '84, Noblesville, first vice-president; John C. Shirk, '81, Brookville, second vice-president; Mrs. Kate Milner Rabb, '86, Indianapolis, third vice-president; Ulysses H. Smith, '93, Bloomington, secretary; Benjamin F. Adams, '83, Bloomington, treasurer. The executive committee consists of five Bloomington alumni: Nicholas O. Pittenger, '11, Mrs. Ella Rawles Springer, '88, Schuyler C. Davisson, '90, Mrs. Ruth Steele Brooks, '10, and William M. Loudon, '91. Dr. Adah McMahan, '89, of Lafayette, and Albert Stump, '12, of Indianapolis, were elected new members of the Alumni Council. The election of Councillors was not announced, however, at this meeting. Old members re-elected for three years were: Lillian Gay Berry, '99, Bloomington; Uz McMurtrie, '08, Indianapolis; Dick Miller, '94, Indianapolis; Allan B. Philputt, '80, Indianapolis; Jacob G. Collicott, '00, Indianapolis.

The meeting was cut short because of the All-University convocation in the Men's Gymnasium, the program of which was in charge of the Boosters' Club, a student organization. Dick Miller, '94, of Indianapolis, presided at this meeting, and presented to the audience the captains of the various athletic teams. A cup for winning the singles championship in the Indiana state collegiate tennis meet was to be presented to Frederick E. Bastian, '21, of Indianapolis, but he failed to appear when called to the platform. Announcement was made that the Gimbel prize given to a senior or junior who is trying out for an athletic team "for merit in habits, college spirit, application, and sincerity", had been awarded to Spencer G. Pope, '20, of Indianapolis, football star. The Conference prize for scholarship and athletics was announced as awarded to Willard G. Rauschenbach, '20, of Stillwell. Head Coach Ewald O. Stiehm spoke of the athletic record of the past few years, and of the prospects for success in the future. He went on to speak of the athletic needs of the University, but was cut short by an alarm clock calling time on him. President Bryan made a short but eloquent appeal for physical education and athletics. Quoting Terence's line, "Nothing which belongs to man is alien to me", he went on to say that the Greeks, whom we credit with giving us almost every good thing except religion, laid great stress upon athletics. Dr. Bryan said that he believed with all his heart in inter-collegiate athletics and in every other kind of athletics which is good for man. He concluded with a stirring appeal for united support of clean athletics in the University. The convocation closed with a series of Indiana yells. The band played as the audience assembled and at the close of the convocation. The attendance of students was required and a roll taken. (This because students were required to remain at the University for the Centennial celebration, and a check on attendance was necessary.)

At one o'clock there was an R.O.T.C. battalion parade and review on Jordan Field. The Indiana-Notre Dame game, which was scheduled to follow this review, was declared forfeited to Indiana by a 9 to 0 score because the opponent's team, owing to bad train connection, did not appear on the field at the time set for the game. The Indiana nine, however, proceeded to demonstrate its superiority over the visitors in an exhibition game called almost an hour late. The Notre Dame team was augmented, in this exhibition game, by two Crimson players. After the first inning, resulting 1 to 0 in favor of Indiana, the remainder of the Notre Dame players

arrived. The score at the end of the seventh inning, when the game was called because of the pageant, was 4 to 1 in favor of Indiana.

The first of the three performances of the Centennial pageant was held on Tuesday afternoon. The seats were built in the northwest corner of the campus, near Seventh street and Indiana avenue, and the spot of campus north of the evergreens behind the Student Building, near the River Jordan, formed the stage. The trees furnished the necessary screening and a few paths between them served as approaches.

The purpose of the pageant, according to the author, William Chauncy Langdon, was "to celebrate the progress attained during the hundred years of the University's existence, and to indicate the significance of the educational situation in which Indiana University and all American universities find themselves in the year 1920". The music was composed by Professor Winfred Merrill, head of the music department in the University, and it was performed by the University orchestra. Before each performance the University chimes rang the *Hymn to Indiana*, composed by the late Charles Diven Campbell, '98, in December, 1915, and used in the pageant of Bloomington and Indiana University in 1916. The parts were taken by members of the faculty and students of Indiana University, by their families, and by the citizens of Bloomington.

The first episode was symbolical, introducing Education and her Influences, the earlier and later Colonists, Washington, Franklin, Jefferson, America, Success, and groups of various types and classes. The second episode reproduced almost exactly an episode in the 1916 pageant, in which the first professor, Baynard R. Hall, the first Board of Trustees, the earliest students in Indiana Seminary, Governor Ray, and various parents of pupils appeared in speaking parts. The third episode returned to the symbolical. New figures appeared: the State of Indiana, Indiana University, Difficulties, Arts, Pure Learning, Applied Learning, Play, Inspiration, soldiers, Presidents Andrew Wylie, David Starr Jordan, and William Lowe Bryan. The dialogue in the fourth scene represented commencement day, with a long procession of seniors. A representative of a business concern appeared on the scene and carried off the promising young scholar who had planned to go into educational work, as well as the affable young man who had "just got by", and who, by the way, was promised a larger salary in business than the promising young scholar was to receive in education. Thereupon followed a serious dialogue between some members of the faculty on the future of American education. The last episode, called The Greater Victory,

introduced new figures: War, the Years of War, Europe and her Nations, Peace, the Years of Peace, and crowds of workers. The pageant ended with a great procession, led by Education and Success.

The costumes of leading characters and of the dancers were very beautiful, and the many colors on the background of green were most effective in the warm sunshine. Scores of joyous, graceful dancers appeared in the symbolic scenes, dressed, as the *Student* reporter said, "in all the colors of the rainbow, and many which were never seen in any rainbow".

At seven o'clock a band concert was followed by a community songfest held in the campus amphitheater. A reception by President Bryan and the faculty, in honor of the seniors and alumni, held in the Student Building, concluded the day's festivities.

Wednesday, designated as Class Day, was a busy day for the alumni. The alumnae gathered in the Auditorium of the Student Building to take breakfast with the women of the senior and junior classes and with the women of the faculty and the wives of faculty members. Dr. Cora B. Hennel, '07, assistant professor of mathematics, as toastmistress introduced Dorothy Donald, a junior, who spoke briefly on what lies ahead of the University in the next hundred years. Mrs. Frances Morgan Swain, wife of former President Joseph Swain, gave reminiscences of her days in the University as a student. Cordelia Smith, '17, of New Albany, in her toast urged that the alumni serve the University. She mentioned some specific things which alumnae associations of graduates can do: arouse interest in extension courses in towns where such are offered; try to get the good high school students, not the poor ones, to come to Indiana University. She told of a New Albany high school boy, a very weak student, who came to Bloomington to attend a University athletic contest and came back home, pledged to a fraternity. His athletic ability was bringing him to the University—nothing else. Another thing that alumnae might work for was more recognition of the women professors in the University. As an instance of the lack of recognition, altho in a minor matter, she mentioned the fact that at the reception given by the faculty the night before, not a woman professor was in the long receiving line. Mrs. Benjamin F. Long (Lucy Nichols, '01) emphasized the pleasurable associations of college life. Dean Agnes E. Wells outlined rooming conditions for women students, speaking of furnishing the dormitory and another house for women students, under University management. Mrs.

George Ball, of Muncie, wife of one of the University trustees, made last fall a gift of \$1,000, which was used to furnish the dormitory. In March, Mrs. Charlotte Lowe Bryan, '88, made a gift of \$500 for gift scholarships and \$500 for coöperative house furnishings. These were announced with other gifts on Commencement Day. Miss Wells told of plans for housing freshmen next year, keeping them as far as practical out of sorority houses and putting them in University-controlled houses in the hope of creating a better University spirit. Two more houses will be leased, one to be coöperative, with expenses reduced to a minimum. Miss Wells hoped that gifts of money might provide for the furnishing of the coöperative house in order that the girls participating need not pay interest on borrowed money. Before the meeting closed the following gifts of money for this purpose were made or pledged: Mrs. Benjamin F. Long, Logansport, \$250; Mary E. Cox, '95, Elwood, \$25; Ruth R. Maxwell, '07, Oak Park, Ill., \$25; Carrie Ong, '12, Columbus, \$25; Mrs. William E. Jenkins (Charles Anna Moore, '92), Bloomington, \$25; Mrs. Samuel E. Smith (Martha Rogers, ex-'81), Richmond, \$25; Mrs. Ernest Railsbach (Irene Neal, ex-'11), Boston, Mass., \$25; Anna R. Clark, '15, Bloomington, \$25; Dean Agnes E. Wells (will collect), \$250.

Dean Wells also spoke of scholarship funds. During the past year Mrs. Elizabeth C. Marmon, of Indianapolis, gave \$1,000, \$700 of which is to be used as loan scholarships without interest, and \$300, later increased by \$222.10 from other sources, used as student aid. At the meeting the following sums were pledged for gift scholarships: Mrs. Joseph Swain, Swarthmore College, \$250; Mrs. James William Fesler, Indianapolis, \$250; Mrs. James A. Woodburn, Bloomington, \$50; Assistant Professor Edna Johnson, '98, Bloomington, \$50; Assistant Professor Elizabeth Sage, Bloomington, \$50; Mrs. Edgar Hiatt (Katherine F. Schaefer, '98), Richmond, \$50; Lucile Clevenger, '19, Anderson, \$25; Mrs. George Shortle, (Helen R. Shirk, '02), Tipton, \$50; Fannie Belle Maxwell, '81, Lake Forest, Ill., \$25; Etelka J. Rockenbach, '05, New Albany, \$25; Mrs. Alfred M. Brooks (Ruth Steele, '10), Bloomington, \$25; Mrs. Frank M. Andrews (Marie Opperman, '02), Bloomington, \$25; Cordelia Smith, '17, New Albany, \$25; Hattie Listenfelt, '07, Chicago, Ill., \$25; Jean Bond, ex-'09, Newcastle, \$25; Mrs. Robert Rossow (Ethel Simmons, '06), Culver, \$25; Mrs. James K. Beck (Lena Margaret Adams, '76), Bloomington, \$25; Mrs. Henry B. Veatch, Evansville, \$25; Mrs. Frank H. Hatfield, Evansville, \$25; Mrs. Frank H. Hatfield (will collect), \$250.

At a meeting of the University women held at the close of the convocation on Thursday, the purchase of three Steele paintings with \$1,100 raised during the year as a Centennial thank offering was authorized.

A state-wide committee of alumnae—one woman in each congressional district—was chosen by Miss Wells to attempt to do certain things in their districts,—among other things, to encourage scholarship, in some cases by working with chapters of the Association of Collegiate Alumnae; to advertise the University, to entertain high school seniors once or twice each year, and to inform the University of promising prospective students. The committee suggested that the gift scholarships be awarded thru competitive examination, subjects to be determined later. The committee appointed follows: Mrs. Ruth Steele Brooks, '10, Bloomington; Mrs. Frank Hatfield, Evansville; Cordelia Smith, '17, New Albany; Vida Newsom, '03, Columbus; Mabel Ryan, '99, Terre Haute; Mrs. Katherine Schaefer Hiatt, '98, Richmond; Mrs. Grace Rawles Wheeler, '91, Indianapolis; Evangeline E. Lewis, '94, Pendleton; Mrs. Lela Todd Boyd, '10, Kokomo; Mrs. Zella Wiseman Atkinson, '09, Gary; Flora E. Purviance, '99, Huntington; Marjorie Suter, '17, Ft. Wayne; Mrs. Ethel Simmons Rossow, '06, Culver; Dean Agnes E. Wells, Indiana University.

A second meeting of the Alumni Council was held during the morning, when plans for raising an alumni endowment were discussed. A committee composed of Lillian Gay Berry, '99, of Bloomington; Benjamin F. Adams, '83, of Bloomington; and Oscar H. Williams, '05, of Indianapolis, was appointed to chose, in conference with President Bryan, a new Alumni Secretary to succeed Humphrey M. Barbour, '15, who had resigned, resignation to be effective June 5.

At noon, class luncheons were held on the campus. Since all alumni were urged to return for the Centennial commencement, no special class luncheons were arranged beforehand, the matter being left to the returning alumni. The University cafeteria served the lunches. About 350 persons participated. Some classes made their presence known by yells and songs; one (1915) by wearing orange festoons. The list of classes holding luncheons is reported as follows: 1869, 5; 1879, 7; 1881, 12; 1883, 12; 1890, 26; 1892, 5; 1894, 10; 1900, 8; 1906, 13; 1910, 15; 1912, 20; 1913, 20; 1914, 15; 1915, 40; 1916, 35; 1917, 25; 1919, 40. (Some of these figures include children of alumni.) The class of 1883 reported a breakfast held at the home

of Mr. and Mrs. Benjamin F. Adams, with Dr. Jordan and Dr. Swain as guests.

The faculty-senior baseball game, postponed from Monday, was played in the forenoon, resulting in a victory for the faculty, 10 to 9. The line-up included the following: faculty—Rauschenbach (student catcher), McNutt, Morgan, Cogshall, Rathbun, Lee, Treat, Stiehm, Schlafer; senior—Bowers, Moss, Hartzell, Byrum, Parker, Hiatt, Lee, Carson, Reed, Michaelson, Bergdoll. The final game of the inter-fraternity baseball series was also played on Wednesday, resulting in a victory for the Phi Kappa Psis over the Sigma Nus, 5 to 4.

The second performance of the pageant was given at four o'clock. The weather was ideal, the bright sunshine bringing out beautifully the coloring in the symbolic scenes. During this performance of the pageant, a U.S. army airplane from Indianapolis flew above the campus, looping the loop nad performing other stunts.

The alumni dinner on the campus was a delightful occasion. The almost triangular section of campus lying between the Kirkwood avenue driveway, the Student Building, and the Library was hedged in with green boughs, and Japanese lanterns were strung above the branches. The University band furnished the music. No speeches were arranged for because it would have been impossible for the diners to hear. Five hundred alumni enjoyed this occasion, and many were unable to attend because they did not make reservations in time. After the dinner the guests mingled with each other and greeted alumni who had come in too late for class luncheons at noon. Altogether it was one of the most delightful affairs of the week.

An informal reception and dance in the Men's Gymnasium closed the day's festivities.

Frank L. Jones, '98, of Indianapolis, presided over the All-University convocation on Thursday morning, the program of which was in charge of the Indiana Union. He introduced Mrs. Mary Maxwell Shryer, daughter of Dr. David Hervey Maxwell, who might be called the founder of Indiana University. She presented to the University a wreath of flowers, saying:

In the memory of my father, Dr. Maxwell, the president of the first Board of Trustees of Indiana University; in memory of Dr. Andrew Wylie, the first president; in memory of my brother, Dr. James Darwin Maxwell, '33; in memory of Miss Sarah P. Morrison, '69, the first woman to graduate from the University; in the memory of the professors, especially those whom I have known personally,

Drs. Wylie, Owen, Ballantine, Kirkwood, Van Nuys, Atwater, and Boisen; and in the memory of the students of those days who have joined the poet's innumerable caravan, I dedicate from all of us this wreath of flowers.

Mrs. Otto Rott (Anna G. Cravens, '01), Indiana state treasurer of the Daughters of the American Revolution, presented to the University an Indiana state flag. She told how Indiana had had no state flag until 1917, when the legislature adopted one submitted by the D.A.R.

Albert Stump, '12, of Indianapolis, announced that the alumni association of the Indiana Club had established a loan fund, amounting to more than \$500, in memory of two members—Bertram W. Pickhardt, ex-'12, of Huntingburg, and Ornan J. Six, '13, of Gwynneville, who died during the war, one in action and the other in camp of pneumonia-influenza. The fund is to be known as the Pickhardt-Six Memorial Loan Fund.

Dr. David Starr Jordan, president of the University from 1885 to 1891, now chancellor emeritus of Leland Stanford Junior University, spoke in a reminiscent vein for a time, and then turned to his theme, "The only way out is forward." He spoke of the University in Dunn's Woods, when there were only two buildings—Wylie and Owen Halls. There were 135 students, but "there were giants in those days." In 1883, he, then professor of zoölogy, and members of the senior class took a two weeks' tramp in the Cumberland Mountains. The last time he was here was just before the war. He tried to believe, he said, that it was honorable for America to keep out of the war, but when we declared war he gave this message to the press: "We are now in the war and the only way out is forward." He went on to say that we cannot stay aloof from the rest of the world now, and that any league of nations is better than none. The foundations of America are solid, but the penalty of solidity is service to others. When a great part of the world is stricken with starvation, with disease, America's mission is the greatest since the Civil War, and duty points forward.

In introducing Enoch A. Bryan, '78, commissioner of education of the state of Idaho, Mr. Jones said that he knew four Bryans, three of whom had been presidents and one who tried to be. Dr. E. A. Bryan, formerly president of the Washington State College, spoke of the significance of the hundred years just past. Indiana University, he said, was practically the first of its class. Some of the so-called state universities which were founded earlier were different in organization, management, and purpose. Some of their governing boards were self-perpetuating, and the institutions were some-

what monastic in character. Indiana University represented the state and national ideal in education and it received both state and national support. It stands for education for the people, and is a part of the state school system. If it is to rise to the full measure of its usefulness, if it is to hold its own against competitors, it must have behind it the resources of the state. In his message to the alumni he urged them to become conscious of their relationship to the entire nation. Again, professional men going out must feel consciously the support of their Alma Mater.

The next speaker, Joseph Swain, '83, now president of Swarthmore College, president of Indiana University from 1893 to 1902, set forth what he thought the students of Indiana University can do to promote its program. The first thing is to develop into the greatest men and women possible. Opportunities, he said, are much greater today than in his younger days. Mr. E. H. Gary gave as his basis for determining the salary rating of a man these four things: integrity, good judgment, ability to work, and the habit of success. These, Dr. Swain said, might be near objects of education. The desire to succeed must be accompanied by the desire to serve. Herbert Hoover in his college career did not wish to study anything except that conducive to the making of a great engineer, but later he heard the call to feed the Belgians and he followed the call. It is all very well to start out to be a great engineer but one should obey calls to service. The second thing which the students can do is to spread the gospel of higher education all over the state. A college president has said that the college trained man has 250 times the advantage over the untrained man. Dr. Swain then presented some figures to show the capitalized value of higher education. In the third place, he said, the students should realize more fully the privileges which the state gives them and should pay them back in some financial way. Do not, he said, be satisfied with presenting the matter to the legislature, but present it to your own hearts and minds. Swarthmore College, one-half as old, and with only a fraction of our number of students and alumni, has raised \$3,500,000 in the last eighteen years. Indiana University alumni and students have not begun to appreciate the value of what they have received and are not awake to their obligations.

Mr. Jones, the chairman, introduced Walter H. Crim, '02, of Salem, who presented the Rose Loving Cup (donated by the late Theodore F. Rose, '75, to be awarded each year to the class having the largest percentage of living members present) to the class of '83. Clarence L. Goodwin, of Greensburg, Pa., responded with reminis-

cences of the two weeks' tramp in the Cumberland Mountains under the chaperonage of Dr. Jordan, and of the reunion held in the Yosemite valley five years ago with Mr. and Mrs. David A. Curry (Jennie Foster). He said he wished to acknowledge to the University a debt of gratitude, to pay a tribute of love to the teachers of the early eighties, and to reassert gratitude and loyalty to the University. Following Mr. Goodwin's talk the class gave the following yell: "Indiana, Indiana, Dr. Jordan, Dr. Jordan, Cumberland Gap, Cumberland Gap, Yosemite, Yosemite, Centennial, Centennial, Indiana, Indiana, Eighty-three, Eighty-three."

In the afternoon Indiana won from her old rival, Purdue, 6 to 5, playing before what was probably the largest crowd which ever witnessed a baseball game at Indiana University.

The last performance of the pageant took place between four and six o'clock.

In the evening the band gave another concert and there was community singing on Jordan Field.

Judge Andrew A. Bruce, recently chief justice of the supreme court of North Dakota, addressed the Law School seniors in Assembly Hall. He spoke on "The Obligations of the State toward the Legal Education of Its Citizens". The American ideal of government, Judge Bruce pointed out with frequent illustrations, has been that of government by law, and not government by men, or government by temporary majorities. But we have given the ballot to everyone. We have the initiative, the referendum, and the recall. Everyone may vote on constitutional questions, anyone can be elected to public office, and anyone may be a lawmaker. The majority is all-powerful. Whether we shall have property or liberty is after all for the majority to decide. Yet the average voter knows nothing of the history and the growth of our laws. He knows nothing of the centuries of trial and suffering and experience that are crystallized in every line of our constitution. He knows nothing of the duties of our courts and of the functions that they serve. Somewhere in our educational system we should furnish an opportunity for all to acquire the knowledge which all should have for the welfare of the state. In these days a state university, acting thru its law school, must do more than merely train practicing lawyers. It must be a school of jurisprudence; it must be a school of Americanism. It must educate legally trained leaders who can guide the social advance. We cannot safely play at politics or at government any longer. For the sake of the public welfare our democracy must become legally intelligent.

Following his address there was an informal reception by the senior law class in Maxwell Hall. In the Men's Gymnasium, an informal reception with dancing and stunts by the Cosmopolitan Club closed the festivities.

Rain on Friday morning necessitated holding the graduation exercises in the Men's Gymnasium, instead of outdoors as in recent years. This change worked an advantage in at least one respect—the audience could hear the speakers much better than they could have heard them in the campus amphitheater. An innovation in the music this year was the singing of two hymns by the audience, led by the University chorus and orchestra: *The Hundredth Psalm* and *The Battle Hymn of the Republic*. Rev. William Burrows, rector of the Episcopal Church in Bloomington, pronounced the invocation and Rev. Joseph C. Todd, head of the Indiana School of Religion (formerly the Bible Chair Hall of the Christian church), gave the benediction.

About ten days before commencement, Major-General Leonard Wood, who had been engaged to give the chief address of the day, canceled his engagement because of the pressure of political affairs.

The three former living presidents of the University—David Starr Jordan, 1885-91, John Merle Coulter, 1891-93, and Joseph Swain, 1893-1902—were present and each delivered a brief address. In introducing Dr. Jordan, President Bryan used the lines of Goldsmith descriptive of the village preacher:

As some tall cliff that lifts its awful form,
Swells from the vale, and midway leaves the storm,
Though round its breast the rolling clouds are spread,
Eternal sunshine settles on its head.

Dr. Jordan's address was largely reminiscent of the days in which he was professor (1879-84) and as president (1885-91).

DAVID STARR JORDAN

The great growth of the University makes me but feel that my place is back among the early founders, not far from the days in which one professor and the president completed the faculty. In those days the president and the professor once met on a foot-log which crossed the stream on the main street of the town. Neither would budge and the president elbowed the professor into the brook. And speaking of the brook, I once reminded the Board of Trustees that they need name no building for me; I asked only that this brook, coming thru what was then the new campus, should be

called the River Jordan. And this was done, but they did still better, for the meadow across the brook they named Jordan Field. There is one joy in being numbered with the "has-beens" of the academic world, the *alors célèbres* of the French historians. That is, one may look over the scenes of life with no worries for the future and no sting for the past. What is done is done and the future belongs to the others.

As I look over my part in the history of Indiana University, I feel that I was in a position to lay a solid foundation for its advance. My first act was to loosen up the bonds of tradition, to develop courses of study which should justify themselves by leading to real scholarship. No scholarship worthy of the name comes from unwilling work. A ready-made course of study is the acme of pedagogic laziness. It is like a ready-made suit which fits nobody.

Before my day, the president had in his office a blackboard three feet square on which was indicated the whole curriculum for the term. Everything was cut and dried, representing as Agassiz used to say "the dregs of learning".

In 1885 we relegated all these subjects to the freshman and sophomore years and filled the last two with advanced work in those fields in which we were able to develop it. As mental training, advanced work is far superior to elementary subjects, and the fact that advanced training in science, history, languages, philosophy, could be had at Bloomington soon brought a series of very strong students. Indeed, for the number, I doubt if any other institution had so large a percentage of able and original men and women as came to Indiana in those days.

And the general attendance began to grow. When I became president on January 1, 1885, there were but 135 students enrolled in college classes. In the preparatory school were as many more, but these were soon discharged, turned over to the Bloomington high school, thus establishing the proper relation of the University to the high schools over the state.

Dr. Coulter and I had fought in many an arena, or, as we used to say, on the "bloody sands of education" for freedom of choice, the element of consent in education. This involved a plea for scientific training, not as against any other, but as a means of grace and development to those who found little digestible material in the old prescribed courses of the classics.

We made no attack on the classics for those who could use them. As Thoreau once said, "Those only talk of forgetting the Greek who never knew it." But for freedom to choose we had

urged in season and out of season, and this was my opportunity for making it go. And it went successfully. Next, the problem of choice of professors became important. And in this, after some not too successful experiments, I adopted the plan of choosing the most promising of our alumni, promising them positions, when, after study in the East or in Europe, they were prepared for them.

The first of these thus chosen was Horace A. Hoffman in Greek, now completing his thirty-fifth year of service. Next came Joseph Swain in mathematics, James A. Woodburn in history, William Lowe Bryan in philosophy, Allan B. Philputt in Latin, Robert E. Lyons in chemistry, Arthur L. Foley in physics, Rufus L. Green in mathematics, and somewhat later, Carl H. Eigenmann in zoology, William A. Rawles in economics, David M. Mottier in botany, Ernest H. Lindley in psychology, John A. Miller and Robert J. Alely in mathematics, and others whom for the moment I may have overlooked.

This plan served like a breath of fresh air. All these were students of eminence, thoro and devoted. They were in sympathy with new ideas in education, and perhaps, best of all, they were intensely and wholly loyal to the University's best interests. In early days the young men in education made a hard struggle for the recognition of advanced work. But when the time came the change seemed easy, and with the loosening of academic traditions came the great increase in influence and power the colleges have today. Jerome K. Jerome, in England, once said that the young men butt their heads against a stone wall and find it easy to break thru if enough young men before them have butted hard enough. In these days, it dawned on us that Indiana was the land of poets. Not only was there the incomparable Riley, but every county had its own poet, usually one whose songs were worth hearing. One of our Indiana men, Alvin Heiney, I believe, voiced the common feeling when, on declining any front seat or place in the celestial choir, he asked only for "a place on the bleachers where ten thousand Hoosier poets sit".

In those early days I used to go about the state, speaking in every county seat on the value of higher education. Whenever I could, I used to take Will Bryan with me and in silver tones he used to intensify my message. He used to tell the people of his father's farm in Monroe county, a spring in each field flowing downwards toward a large stream "which drew after it a retinue of brooks as noble as those of the Nile or the Jordan". And the current of learn-

ing once in motion in Indiana could draw a retinue of noble souls, as worthy and as devoted as in any other academy, no matter where located.

Each time as I visit these institutions of the West I am impressed with the future stability of our democracy. Wisdom is at the hand of whoever will take it. From our state colleges and universities upwards of 30,000 men and women will graduate this month. The privilege of knowing is confined to no caste nor class. There is no "class consciousness" in democracy. We are all—as Justice Marshall said long ago, of one class—"just citizens".

Few of us realize the immense advantage this gives to America. In almost every other nation, the right to know is a caste privilege. Only those of the right class can be entitled to education. No nation has any other treasure so precious as the talent of its people, and where education is limited by caste, so much of the native talent goes to waste untrained.

The essential features of democracy are its provision for freedom, order, and justice—the freedom to know above all other freedom, and justice the ultimate purpose. By justice we mean that condition in which every man and woman shall be free to make the most out of life. A generous education should be the birthright of every child of the republic.

There is essential stability in the democratic nation in which discipline springs from within, as compared with a nation in which order is enforced from without, and in which the citizen is not the self-controlled unit of government, but "a brick in a wall not knowing the nature of the edifice of which he forms part".

Should all application of force be suddenly drawn from America, the stability of society would not be affected. Should compelling force be withdrawn in a land of autocracy, the people would be like sheep in a storm, not knowing what to do, or like wild horses in a prairie fire, doing always the wrong thing. This prophecy I published in Belgium in 1912, but I had no expectation of seeing it so soon verified.

And the strength of this country will all be needed for the redemption of Europe. The last time I spoke in Bloomington, I hoped that our nation might escape the waste, the strain, the demoralization, the loss of values, which always follow in the wake of war. But this proved impossible. We cannot get peace by lying down. We could not stand by and see Britain beaten in a righteous cause. Nor could we see Belgium devoured or France dismembered.

When three years ago war was declared I gave this message to the press, "We are now in the war and the only way out is forward."

The great struggle is only half over, and our special part, the restoration of the value of human life, is barely yet begun. We cannot separate ourselves from humanity, one-half suffering from starvation, the other delirious with crazy joy. A mad world and a sad world in the aftermath of war.

And again I must say—we are a part of the mangled world—and still as before, "The only way out is forward."

John Merle Coulter, head of the department of botany in the University of Chicago, was the next speaker.

JOHN MERLE COULTER

It is a pleasure to renew my contact with surroundings that were once very familiar. During nearly twenty years of college service in the state, many of the faculty of Indiana University became my intimate associates, so that my *sympathetic* connection with the University extended far beyond my *official* connection. It is not for me to speak of the history that this occasion commemorates. This is a matter of record, a record of which you may well be proud. It is more appropriate that I should speak of an important problem that universities are facing, whose solution will be a part of your subsequent history. Men should face forward, backed by all the assurance that history can give, determined that the future shall be worthy of the past.

THE NEW SPIRIT

During the war we realized that our country experienced a wonderful transformation. It was as tho we had awakened suddenly and found ourselves in a new world. While the transformation in our material affairs was striking, the transformation in the spirit of men and women was most impressive. In the experiences thru which we were passing, we seemed to have been born again, with new motives and a new outlook on life. It is this new spirit I wish to consider, that we may realize what it is, and whether it is worth preserving now that the stress of war is over. Is it a spirit that is worth while only in war, or is it also the most effective spirit in peace? Is it something we are expected to lose and go back to our old ways, or is it really a rebirth, a spirit that has come to abide? Is it something we need only for a special occasion,

or is it something that we have always needed and have only discovered the need thru a great catastrophe? The most important things have usually come to the world thru suffering. Shall we let this new spirit die at the moment of its birth, or shall we make it strong and dominant?

The transformation did not consist in the fact that this new spirit was unknown; but in the fact that it was no longer exemplified by a small minority, for it animated the overwhelming majority. In other words, it was not the rebirth of an individual, but the rebirth of a nation. How shall we define this spirit? Perhaps in no more concise and comprehensive terms than to call it the spirit of coöperation and service.

You are familiar with the expression of this new spirit in communities everywhere. Thousands of men and women, who had been thinking only of their own selfish interests, were born again into a new world of service. They came to think of life as they never had done before, and they enjoyed it as they never did before. They discovered the pleasure of service, the sense of being of some use in the world, and of contributing time and work and money to a great cause. If this same devotion had always been alive, the world would have been much farther along in its progress. Patriotism broke down the barriers of selfishness, and our old motto, each for himself, was replaced by the new motto, each for all. In the period of reconstruction we are to determine whether patriotic coöperation shall continue or whether our selfish competition shall assert itself again. It must be evident to all that the spirit of selfish competition was responsible for the war. So disastrous a result should banish that spirit forever from the desires of men.

To take advantage of this lesson and to train a new generation into the spirit of coöperation and service is the great burden laid upon our schools and colleges. The ordinary curriculum provides amply for imparting facts, for developing habits of mind, for cultivating taste, but in the past all this has been regarded as an equipment for what is often called the "game of life", which usually means a competitive game. Such education is necessary, of course, for it is really an equipment, but it has not saved us from the disastrous results of competition; in fact, all these things belonged to Prussian education, and we see how this equipment was used.

Our education must contain something more, something more fundamental than knowledge and taste. It must contain a training in spirit, the spirit of coöperation and service. Such a spirit is more important to the progress of the human race than knowledge. We

were shocked by war into the exhibition of this spirit, forced by disaster into allowing it to dominate. It continued to live as long as the war lasted, but it is our problem now to discover what has been called "a moral substitute for war", something that will arouse and keep alive in peace the same fine spirit that the war aroused. This is the great problem of our educational institutions today, for they are molding the generation that will be conspicuous in the years of reconstruction.

This spirit of coöperation and service has a wider meaning than to develop a nation into its maximum strength and efficiency. As citizens of a nation we may continue to work *with* each other and *for* each other, but if we confine this spirit by a national boundary we have advanced only one step in coöperation. It would be like looking at an eagle in a cage, when we know that its best expression is called out in freedom. The spirit of coöperation and service knows no national boundaries, but seeks its expression in men everywhere. It is the effective, animating spirit of the human race as a whole, making for its maximum development.

The spirit of coöperation is the spirit of good-will. Men have developed this spirit more than have nations. There is still abundant selfishness among men, but when we compare the people of today with those of a century ago, and realize how much more they are interested in the general welfare, as shown by the increasing organized opportunities to serve the people, we realize that good-will among men has been growing, and is expressing itself increasingly in a thousand ways.

With nations, however, the case is different. International relations have continued to be based upon selfishness. "Get all you can and give only what you must", is the international motto. It is the business of diplomacy to see to it that this motto is followed. A man may be a philanthropic Christian gentleman among his associates, his life preaching the message of good-will, but when called upon to act for his country in its relations to other countries, he ceases to be either philanthropic or Christian. He gets what he can for his nation, and yields only what he must to other nations. It was not the selfishness of men that brought on the war, but the selfishness of nations, and the sad part of it is that men must suffer for the sins of nations.

But a nation is what its people make it. If the people cultivate good-will in their own living and emphasize it, a nation will presently begin to express the belief of its people. There has developed a great reservoir of good-will among men, which has been seldom

drawn upon, but in our crisis there was such an outpouring of goodwill, expressing itself in service, that we surprised ourselves. Nations also, as well as individuals, learned the lesson of goodwill and mutual service. It seemed as patriotic to serve England, France, or Belgium as it once did to serve ourselves. Can these nations ever forget the stimulus of companionship developed by mutual service and lapse again into selfish nationalism? We talk about the brotherhood of man as the goal of Christianity, but this goal will never be reached until this new spirit is free to express itself, and it never will express itself until it is included in all education.

It may be claimed that we *have* been teaching this spirit; perhaps we have, but the methods have been faulty and ineffective, for the results have not been large. In general, so far as we have been teaching it at all, it has been by talking, by exhortation. We have never given it the serious attention that has been given to what are regarded as the formal subjects, the things that train the mind. If our education has taught us anything as to effective methods of teaching, it is that the laboratory, which means actual contact with material, is the effective method. Have we developed the laboratory method in the most fundamental phase of education, the training of the spirit? If it is of fundamental importance that young men and women be trained in the spirit of coöperation and service, what laboratory opportunities have we developed? Every institution is a human laboratory, full of diverse material. The development of coöperation and service in such a group is left largely to individual initiative, and as a consequence it expresses itself chiefly in the segregation of a number of congenial groups. The spirit of coöperation and service has nothing in common with congenial groups; its great mission is with uncongenial groups.

Habits of thought are formed chiefly during the period of education, and habits of thought are largely controlled by activities. It is one thing to talk about coöperation, and another thing to coöperate; it is one thing to talk about the beauty of service, and quite another thing to render service. We must devise methods in connection with our educational programs by which coöperation and service become habits, fixed by *practice*. There is no more important phase of education, when we consider the future of the nation and of the human race.

This principle of coöperation applies not only to communities and nations and the human race as a whole, but also to the individual, if he is to develop his maximum strength and efficiency.

The individual is the unit in a community or nation, and therefore adds to or subtracts from the total strength and efficiency. It is fundamental, therefore, that each unit shall obey the law of coöperation in his own development.

No phrase is more common than that each of us is a complex of body, mind, and spirit. This means a community, which lives either in competition or coöperation. With competition the result is an enfeebled product; with coöperation the result is the maximum strength of which a given individual is capable. In your individual development, which of these two spirits is in control?

I have known even students who emphasize the body, allowing it to compete with mind and spirit. The body is favored at the expense of mind and spirit, and the result is that the individual becomes either a professional athlete, which would probably be the most desirable result in such a case, or a victim of vices. The result in efficiency as a citizen you realize. The maximum strength and efficiency are not secured. I have also known men who emphasize the mind, allowing it to compete with body and spirit. The mind is favored at the expense of body and spirit. These are the so-called "bookworms", who are defeating their own purpose thru competition with the body, which should keep the mind in tone, and also thru competition with the spirit, which should direct and make effective their mental training. The result is certainly far short of the possibilities of the initial equipment.

I have even known men who emphasize the spirit, allowing it to compete with body and mind. The spirit is favored at the expense of body and mind, especially the mind. These are the "fanatics", who are blocking themselves by lack of bodily or mental equipment, or both. No one would regard them as effective citizens.

Think of your make-up as resembling that of an automobile. The body is the machine, the mind is the motive power, and the spirit is the pilot. Imagine stressing the machine and paying no attention to motive power or pilot, or being solicitous about the motive power and disregarding the machine and pilot, or thinking only of the pilot and letting the machine and motive power run down.

I have gotten into the habit of thinking of men as representing these different categories: those who are simply machines, that of course get nowhere; those who represent motive power, but apply it to no machine; those who would pilot things, but have nothing to pilot. Perhaps the worst combination, however, are those men who have a machine and motive power, but no pilot. Such men run

amuck. Surely none of these combinations are attractive, because none of them makes for efficiency, and none of them makes for a desirable citizen.

You realize, on the contrary, what complete coöperation means, which permits body, mind, and spirit to become mutually stimulating. The result is that each becomes stronger thru coöperation with the others. Cultivate all of these regions of your being; let no power of body or mind or spirit go uncultivated, that you may contribute your full momentum to the progress of society.

When citizens represent such a product we shall possess the material for a strong nation, a nation that can contribute its full momentum to the progress of nations and to the establishment of a coöperative internationalism.

With this presentation of what I have called the new spirit, the spirit of coöperation and service, it must be apparent that it makes for the strength and efficiency of the individual, and thru such individuals for the strength and efficiency of a nation. It must be evident also that the training of such a spirit must be a part of education, definitely provided for, not left to casual exhortations or individual initiative, and certainly not included among electives. In facing such a training, however, it should be recognized that it will meet a greater obstacle than stupidity or laziness or lack of interest. This fundamental obstacle is *selfishness*, which in turn is the underlying stimulus for competition. We are born supremely selfish, which up to a certain stage means self-protection, but the majority never get over it. It means the constantly recurring question of one's own pleasure or profit. It is an example of an evil application of a normal impulse, for a man should be self-centered to a certain extent, to cultivate within him that dignity of purpose, that consciousness of strength, which will lead to his best development; but when self-centering becomes self-gratification, then follows the whole train of evils under which society and the nations today are groaning.

I bring this message especially to students, for they represent the group that is to make the history of the next generation. The destiny of the country for good or evil is entrusted to the young of today. In this sense, therefore, in speaking to them, I am speaking to the most important element of society, for in their keeping our future lies. It is with this in view that our educational institutions have been founded, and it is of the greatest importance that the youth of today form vigorous habits of thought and action, and realize the fundamental things that make for progress and peace.

Carry with you in your individual lives and in your lives as citizens the thought that progress lies, not in the path of selfish competition, but in the path of coöperation and service.

The last president before Dr. William Lowe Bryan was Joseph Swain, '83, who is now president of Swarthmore College.

JOSEPH SWAIN

FORTY YEARS OF INDIANA

I have two advantages over Dr. Jordan and Dr. Coulter. I concede the rest to them. I had in my administration the advantages of their experience and wisdom and I am an Indiana man.

It has been suggested that I speak today of Indiana University as I have known it. I entered Indiana in the fall of 1879, forty-one years ago this coming fall. From that time until 1902 as student, teacher, and president, with the exception of three years, one in Edinburgh, as a student, and two at Stanford, I was a part of the University and it was a part of me. It was so much a part of me that it was many years after I left here before I could shake off the hold it had on me and cease to think of her problems as my problems. I shall never cease to think of her nor cease to love her. It is said that the things one remembers best of his Alma Mater are not there at all. There are memories that cluster about the spirit of the place. However this may be, I am glad to give you today some of my impressions.

To me the period of 1879 to 1883, my college days, lies between the old Indiana University and the new. I speak of the old with reverence. An institution which had for its teachers such men as Owen, Ballantine, Wylie, and Kirkwood was honored. All were men whose reputations were international in scope. All had a large personal following among the students and citizens of the community. They were all men whom it was a delight to know in their homes and in a social way. They possessed a kind of culture which the narrower system of the present generation of scholars rarely produced. During my student days I felt the liberalizing influence of Kirkwood and Wylie, on the one hand, and on the other I had the advantage of association with the masterful personality and inspiring enthusiasm of the man who created a new era for Indiana University. I consider myself fortunate in having entered Indiana as a student when David Starr Jordan entered as a teacher. We of that day had the rare privilege of sitting at the feet of the very best that the old faculty of gentlemen and scholars had produced

and to be a part of the new era which was begun under the leadership of Dr. Jordan.

I was with him in Europe when the news came of the burning of Science Hall on the old campus. It contained all his collection of fishes, and more than one thousand pages of his unpublished manuscript. I received the word of the great fire of that year before he did and it was my place to pass the word on to him. I had never seen him shocked. Nothing seemed to ruffle his spirits, so I concluded I would give him the message without any sugar coating and watch the result. I simply said to him that I had just received word that Science Hall, containing all that he held dear except his family, had been totally burned, nothing being saved. He looked for a moment at the ground and gave one big swallow and then said, "Well, there is only one thing to do and that is to chip in and try it again." He did chip in and try it again. He wrote letters to his scientific friends all over the world. We made a collection of fishes at Venice and other places in Europe. Collections were sent to him at Bloomington from the Smithsonian Institution at Washington, from the British Museum at London, and many other places. The attic in the one college building left by the fire was fitted up for biology and some of the best work ever done in Indiana was done that fall. Dr. Jordan's group of students that year contained many who afterwards became college professors and men of reputation in many lines. Among these were Rufus Green of Stanford, Eigenmann of Indiana, Norman of Texas, Evermann of the United States Fish Commission, now of California; Meek of the Field Museum, Chicago; Bicknell of the American Red Cross; Bollman, who was a preparatory student at that time but came often to the laboratory and was perhaps the most brilliant of all; and there were many others. Not one of that group can ever forget that term. They all realized that not buildings and equipment but great teachers make a university.

The election of David Starr Jordan to the presidency late in 1884 brought a new type of man to this office. His predecessor, Dr. Moss, was a Baptist minister. The presidents of liberal arts colleges generally were ministers in that day. The election of Dr. Jordan brought out favorable comment in the press, commending the idea of the election of an educator rather than a minister. I remember that J. N. Study, then superintendent of schools at Richmond, Ind., wrote to the Indianapolis *Journal* such a letter. It was many years, however, before the denominational colleges made this step and some have not yet made it. It was in the second year of

Dr. Jordan's administration that the University was moved to the present site. Monroe county came forward in the emergency with a gift of \$50,000. With this sum and \$20,000 insurance money, twenty acres were purchased in what was then known as Dunn's Woods. There were erected Owen Hall, Wylie Hall, and Maxwell Hall, the two former of brick and the latter of wood. The name of Maxwell was afterward transferred to the first Library Building erected on the campus, now used for administration offices and the Law School.

It was during Dr. Jordan's administration that the preparatory department was abolished. This act made the University dependent on the high schools of the state for preparatory schools and made a natural connection between the University and the public schools which was helpful to both.

As the salaries were small, Dr. Jordan filled the chairs of the University with the best young men he could secure, bringing modern training to every department, and the Indiana faculty naturally imbibed the spirit and enthusiasm of their chief. He traveled much over Indiana, lecturing in all parts of the state. He started a group of older students to the University who were attracted by the elective system and the new spirit. It was not uncommon for the teachers to have in their classes a number of students who were their seniors. I remember that one superintendent told me he was ambitious to graduate with his daughter. As a matter of fact, he graduated a year later. Dr. Jordan did not, as most executives, wholly give up his teaching. Nearly all students took one or more subjects with him. Thus all the students knew something of his method of thought, his spirit, and his enthusiasm.

The elective system introduced at Indiana by Dr. Jordan made the graduates of the University the best equipped persons in the state to teach in the high schools. This is one reason why so large a percentage of the graduates of Indiana became teachers. There is no doubt of the fact that Indiana, for the number of its graduates, has a large percentage of them successfully engaged in the work of education.

Dr. Jordan did not allow his other multifarious duties to interfere with his research work. He kept up this work thruout his presidency here and at Stanford. It will hardly be believed by this generation that Dr. Jordan, while president, never had a private secretary. He wrote all his letters with his own hand.

David Starr Jordan was for twelve years a member of the faculty of Indiana, being seven years its president. He has said

that a great man makes a great mark on every youth with whom he comes in contact. Dr. Jordan made a great mark on Coulter, Bryan, and myself, as well as hundreds of others. These marks have influenced Indiana thru the twenty-nine years since he left the state and are destined to influence it for generations to come. For myself, I began with the feeling toward him which a freshman has for his favorite professor. This relationship has continued to exist for more than forty years. During all this period his powers have expanded and his knowledge grown so that I look up to him now as I did in 1879.

The spring of 1891 was a memorable one in Indiana. Senator and Mrs. Stanford came in their private car to Bloomington. Watt Bradfute with his nose for news soon learned of their presence. Watt was impressed with the senator's great wealth and exclaimed to me, "Why, he could buy out the whole of Monroe county!" But Stanford did not buy the county but he took Jordan, Branner, Gilbert, Campbell, Barnes, Griggs, and myself from the faculty to the new institution. At that time Jenks went to Cornell, Motske to Johns Hopkins, and Naylor to DePauw. Thus ten men were taken from Indiana.

Under these circumstances it was highly important that the right man should first of all be secured as a successor to Dr. Jordan.

Dr. Jordan and Dr. Coulter were friends and co-workers in the cause of scientific education in Indiana. They had for many years worked together in educational gatherings in different parts of Indiana and together are largely responsible for a new era of scientific study in the public schools of the state. They also greatly influenced the colleges. Dr. Jordan's faith in Dr. Coulter was such that he urged his appointment as president seven years before when he himself was chosen. It was therefore natural that Jordan should now turn to Coulter as his successor. Coulter was unanimously elected and his selection gave general satisfaction. He gathered about him a young and enthusiastic faculty. The Stanford exodus had called special attention to Indiana. Students came the next year in larger numbers than ever before. Dr. Coulter and his new faculty went into all parts of the state in the interest of the University. The next legislature was friendly. It voted \$50,000 to the University for a new building. Indeed, the State University so prospered under the leadership of Dr. Coulter that in two years after his election here he was called to the presidency of Lake Forest. It was very natural that regret was widespread that he should so soon be called away, when things were moving so smoothly.

The trustees again had to elect a new president, otherwise I might never have been one of the "Big Four" today.

Of my own period of nine years I shall try to be brief, tho memories crowd upon me. In these years the numbers grew from 572 to 1,354. For the first time in the history of the state the State Normal, Purdue, and Indiana were supported by one-sixth of a mill tax on every dollar of taxable property in the state. This amount has been twice increased and has proved a very satisfactory method of providing revenue for state educational institutions in this and other states. Kirkwood Hall was erected from the \$50,000 referred to above; an Assembly Hall and Kirkwood Observatory were also erected. Wylie Hall was rebuilt after the fire and enlarged. A new power-house long outgrown and now substituted by another was built. For a Science Hall \$100,000 was secured. A conditional gift was made by John D. Rockefeller and the campaign begun for the Student Building. Thirty acres were added to the campus.

On the educational side the aim was to make as good as possible all departments rather than to expand extensively. The historical and literary departments were enlarged. The great impetus that had been given by Jordan and Coulter in scientific studies had caused these departments to develop in advance of other departments and place arts and science courses more nearly on an equal basis. Strong men have gone out into the state trained in English, history, education, economics, and politics, as well as science, mathematics, and language.

The growth of the State University was so great that the private colleges of the state felt that something must be done either to check the growth of the State University or to give them a new development. They brought their case to the state legislature in the form of an attack on the State Board of Education of which the presidents of the three state educational institutions were ex-officio members. They made a strong plea for the work of the private institutions. They conducted a propaganda for their cause thru the press and in public meetings thruout Indiana. The bill proposed by the private colleges was brought to an open meeting of the Committee on Education where the state schools, the private colleges, and public schools were represented. At this meeting the tide began to turn. The bill of the private colleges, after a rather bitter fight in the legislature, much talk thruout the state, and publicity in the public press, was defeated, and the presidents of the state schools were retained as members of the State Board of Edu-

cation. The state institutions, in order that there might be no just cause for criticism, proposed a bill which was passed by the legislature and authorized the Governor to appoint three additional educational men on the Board, one of whom should be a county superintendent. The other two were appointed from the private colleges. While this scrap was rather ugly for a time and long drawn out, it did good in the long run. The atmosphere was cleared and it led to a better understanding of the needs of all the institutions and there have been many years of good-will and coöperation by all the educational institutions of the state. No more important legislation has taken place in the last forty years for higher education in Indiana. This struggle will never come again.

There is another incident which brought more strength to the State University which occurred just before I left Indiana. There was a decision by the supreme court of the state that Indiana University is an integral part of the state's school system. The aim of the framers of the first constitution was to establish the public school system of Indiana from the kindergarten up to and including the State University. The decision by the supreme court practically legalized this aim and Indiana University became as much an integral part of the public school system as the elementary schools. After this decision the question was no longer whether Indiana should support its State University but how much the state should support it. When we consider that in 1879 the whole income of the University was \$35,700; that there were 10 teachers and 164 students, and that this year the income is approximately \$999,000, the number of teachers 150 and 3,800 students, we realize that Indiana has come a long way in forty years toward the realization of the dreams of the framers of the first constitution.

When I left Indiana for Swarthmore College there was but one man considered as my successor. The faculty, alumni, trustees, and friends of the University generally all turned to Dr. William Lowe Bryan as the logical man. He was a graduate of the University who commanded a high place as a teacher, scholar, and thinker on educational problems. He had shown great loyalty to Indiana University and had declined numerous calls East and West in order that he might serve Indiana. He had been a member of the faculty under the three administrations previous to his. He had attained greater distinction as an educational leader at the time of his election than any of his predecessors at the time of their election. His advice had been sought and freely given on all the leading problems of the University. After much hesitation and

misgiving on his part, he accepted the unanimous election of the trustees. During his term of eighteen years he has witnessed the greatest development of the University. The attendance has grown from 334 in 1902 to 3,800 in 1920; the income from \$129,800 to \$999,000; the number of teachers from 66 to 150. In this period the number of graduate students has greatly increased and the Graduate School been formally recognized. Schools and departments and courses have been established as follows: Education, Medicine, Extension, Journalism, Comparative Philology, Anatomy, Hygiene, Social Service, Political Science, Physiology, Music, Military Science, Commerce, a Training School for Nurses, Waterman Institute for Research, and combined courses in Arts, Law, and Medicine. The campus has been increased from 50 to 120 acres. Science Hall, for which money was secured in the previous period, was completed. The campaign for \$100,000 for a Student Building was finished and the building erected. The new power-house, Library Building, Men's Gymnasium, Robert W. Long Hospital, and the new Medical Building were all completed. The high character and the standing of Indiana has been attested by many educational organizations both on public and private foundations. Suggestions were made resulting in the greater development and expansion due to greater appreciation by the state. All this is important, but much more do we rejoice in the character of the work done here which is attested by the high place that her alumni now take in all parts of the Union. Wherever I go in the United States I meet Indiana men and women who are loyal and an honor to their Alma Mater.

Did time permit, there are many things I should like to say but I content myself with two things more. I think the best thing about Indiana University has been its strong faculty for the money available. I believe Indiana has had a very strong faculty. In this connection I take what I hope is a pardonable pride in the personnel of the men filling the offices of general administration. These men were in office when I left eighteen years ago and had been my trusted helpers many years before. Where else will you find four such men working together in one institution for so many years as Bursar Smith, who has built up such a strong University office; John W. Cravens, who has filled a unique place for a quarter of a century; Dean Hoffman, who has so well earned the right to retire; and, lastly, the head of the University himself, whom we all so greatly admire, Dr. William Lowe Bryan? I wonder how many of those who see these men and work with them every day

realize what it means to have such a quartet of administrative officers.

Now, finally, allow me to say that in these few minutes it is impossible to give a finished sketch and express the joy I have in coming back and witnessing this magnificent development, but I can say for the past as was said by Paul, "We have planted, Apollos has watered, and God has given the increase." For the future I can say with Whittier,

Our Father's God from out whose hand
The centuries fall like grains of sand,
We meet today, united, free,
Loyal to our land and thee,
To thank thee for the era done,
And trust thee in the opening one.

After the three addresses, President Bryan called on the following deans, who presented the candidates for degrees in their respective Schools: Horace A. Hoffman, '81, dean of the College of Liberal Arts, 240 candidates for the A.B. degree, and 31 for the B.S.; Charles M. Hepburn, dean of the School of Law, 21 candidates for the LL.B. degree and 2 for the J.D. (in addition, 7 LL.B. candidates and 1 J.D., whose names were starred on the program, will receive their degrees in the fall of 1920 if their work is completed by that time); Carl H. Eigenmann, '86, dean of the Graduate School, 21 candidates for the A.M. and 5 for the Ph.D.; Charles P. Emerson, dean of the Medical School, 11 candidates for the Graduate Nurse degree, 48 for the M.D., and 3 M.D. *cum laude*. In all, 382 persons received diplomas.

The following students graduated with distinction: Chester Albert Amick, chemistry, Scipio; Jessie Frances Arnold, Romance languages, Stockwell; Gordon Wesley Batman, anatomy, Mitchell; Claude Elmer Cogswell, history, Bloomington; Addie Viola Coverdale, English, Fort Wayne; Charles Edmon Dickinson, English, Lowell; Byron K. Elliott, economics, Indianapolis; Glenn Pierre Galloway, mathematics, Pierceton; Kenneth Jennings Good, history, Knox; May Avis Iden, English, Etna Green; Henry Calvin Mohler, history, Roann; Bessie Newlon, English, Salem; Thomas Rossman Palfrey, Romance languages, Vincennes; Mabel Vienna Phillips, English, Bloomfield; John Craig Sample, economics, Attica; Mary Alice Seller, Latin, Bloomington; Hiram Elijah Stonecipher, Latin, Zionsville; Herman Steiner Strauss, economics, Fort Wayne; Martha Esther Beatrice Swanson, Latin, Clarks Hill; Merlin S. Temple, mathematics, Kendallville.

Those graduating with high distinction were: Mildred Marie Begeman, Latin, Fowler; Lester Irving Bockstahler, physics, Santa Claus; Cecil Calvert Craig, mathematics, Otwell; Edward Scott Johnston, Latin, Bloomington; William Raimond Ringer, philosophy, Williamsport; Kenyon Stevenson, history, Frankfort.

Secretary John W. Cravens announced the following prize awards and gifts:

The Norton-Mavor Latin prize was awarded to Philip Lowenthal, of Evansville. This prize consists of the interest on \$200 given by Lester L. Norton, '71 (who died June 11), in memory of his daughter, Caroline Buskirk Norton-Mavor, '07, for excellence of scholarship in freshman Latin.

The John W. Foster prize was awarded to Martha E. Neal, '20, of Vincennes. This prize of \$50 is derived from a fund of \$1,000 given to the University by the late John W. Foster, '55, and is awarded annually for the best essay by an undergraduate on some subject connected with the political and diplomatic history of the United States. This year the subject for competition was "Japanese-American Relations since 1900".

Benjamin F. Long, '01, of Logansport, a trustee of Indiana University, gave \$500 to a School of Law Loan Fund, to be available to students in the Law School under the usual regulations relating to loan funds.

Dr. Bernard D. Ravdin, '14, of Evansville, announced that the Ravdin Medal was awarded to E. Vernon Hahn, '20, of Indianapolis. This prize is given to the member of the senior class in the Medical School who makes the highest average in the four-year course.

The Pickhardt-Six Memorial Loan Fund described above was announced, as were also the alumnae subscriptions for scholarships and dormitory furnishings and Mrs. Bryan's gift of \$1,000.

The Bloomington alumnae of Kappa Kappa Gamma offered a silver loving cup to be given to the University woman who has the highest scholarship this year. The winner of the prize [announced later], was Estelle Brown Owen, of Fort Wayne. A similar gift is to be offered each year.

The honorary degree, LL.D., was conferred on four persons: John Merle Coulter, Ph.D. '84, Joseph Swain, '83, Enoch Albert Bryan, '78, and Horace A. Hoffman, '81. In presenting Dr. Coulter, Professor Arthur L. Foley, '90, head of the physics department in the University, said:

Mr. President, John Merle Coulter was born in China, the son of American missionary parents who early returned to Indiana to live. He received his bachelor's degree at Hanover College in 1870, his master's degree in 1873, and his doctor's degree at Indiana University, 1882. He was for five years professor of natural science at Hanover, two years professor of biology at Wabash, two years (1891 to 1893) professor of botany and president of Indiana University, and three years president of Lake Forest. Since 1896 he has been professor and head of the department of botany of the University of Chicago. He founded the *Botanical Gazette* in 1875 and has remained its editor for forty-five years. He is the author of several textbooks and of a large number of papers descriptive of his scientific investigations in systematic botany and morphology, in which he is a recognized authority. He is a member of the National Academy and of many other learned societies of America and Europe, past president of many of them, the retiring president of the American Association.

In recognition of his distinguished career as a scholar, educator, investigator, editor, author, and executive, he is presented for the degree of doctor of laws.

Joseph Swain was introduced by Secretary John W. Cravens, '97, who paid him the following tribute:

Joseph Swain, born in Indiana, he has reflected honor upon his native state; graduate of Indiana University, he has brought additional renown to his Alma Mater; professor in a sister institution of the West, he left his impress there; president of a sister institution of the East, his genius as an executive brought to the college still greater strength and opportunity for service; professor in Indiana University and, later, for nine epoch-making years, its president, his record for achievement was eminent; father of the fraction-of-a-mill tax that placed the institution on a firm financial basis; co-worker with his wife, Frances Morgan Swain, in starting the movement which resulted in the erection of the Student Building; distinguished as a judge of men; a diplomat of the highest type when diplomacy is demanded; man of indomitable will when justice is at stake; as an individual, educator, and executive, he has stood for character and culture; loyalty to friends has ever been one of his chief virtues; he has been prominent and influential in the educational affairs of state and nation; for all these things and more,

Indiana University is deeply indebted to him, and in grateful recognition, he is presented for the institution's highest academic degree, doctor of laws.

Enoch Albert Bryan, brother of President William Lowe Bryan, received the degree after being presented by Professor James A. Woodburn, '76, head of the history department of the University, who spoke thus:

Ladies and gentlemen, upon the initiative of members of our faculty without consultation with our president and without his knowledge, it was unanimously voted by the faculty and Board of Trustees that the honorary degree of doctor of laws (LL.D.) be conferred upon Enoch Albert Bryan, commissioner of education of Idaho.

Mr. President, in accordance with this vote of the University authorities, I have the honor to present for the degree of doctor of laws your brother, Enoch Albert Bryan, bachelor of arts, Indiana University, 1878; master of arts, Harvard University, 1893; doctor of laws, Monmouth College, 1902, Michigan Agricultural College, 1907; president of Vincennes University, from 1882 to 1893; president of the State College of Washington, from 1893 to 1916; commissioner of education of the state of Idaho since 1917. A college president and administrator of distinguished success; a builder of a great educational institution in the state of Washington, to whose early beginnings and progress he has given nearly a quarter of a century of unselfish and courageous service, a service not excelled in the field of education in the great Northwest; a constructive leader of educational opinion; a thoughtful and productive student of the problems of education in their relation to agriculture, to the mechanic arts, to the material resources of the nation and the welfare of the people; at present the head of the educational system of the state of Idaho; a true teacher, a devoted friend and guide to aspiring youth; a man, among the greatest of Indiana's sons, whose distinguished career has reflected honor upon himself and his Alma Mater.

Horace A. Hoffman, '81, professor of Greek, dean of the College of Liberal Arts, and vice-president of the University, who retires August 1 on a Carnegie pension, was presented by Professor Ulysses G. Weatherly, head of the department of economics and sociology in the University. He spoke these words of his colleague:

Mr. President, I present to you for the degree doctor of laws, Horace Addison Hoffman, bachelor of arts, Indiana, 1881; master of arts, Harvard, 1884; instructor in Latin and Greek, 1881-83; professor of Greek, 1885-1920; dean of the College of Liberal Arts, 1894-1920; vice-president, 1919-20. A wise counsellor, a fearless and capable executive, a representative of the best traditions of scholarship, he now lays down his academic office with the respect of the public and the affectionate regard of his colleagues.

David Starr Jordan received the LL.D. degree from Indiana University in 1909.

The president's address to the senior class follows:

WILLIAM LOWE BRYAN

PARADISE

Two men, a poet and a physician—the poet was Maeterlinck and I use his language—stood on a hill in Normandy overlooking a plain where peasants were harvesting wheat. The distant scene was very lovely. Overhead a magnificent sky. Far away the ocean. By it the parish church with its cluster of lime trees and its homely graveyard. And yonder the peasants, men and women, with simple, strong, rhythmic movements building in the wheat stack what the physician calls their monument of life. The distant scene, says he, the air of evening weave their joyous cries into a kind of song without words which replies to the noble song of the leaves as they whisper over head.

When the two men had for a time sensed from afar this exquisite pastoral symphony—type of all pastoral poems and songs—they drew near where the peasants were at work. Then all the beauty vanished. The physician noted that they suffered from the curses of overwork and vice. Some were alcoholic, diseased, deformed, imbecile. Some he knew to be mean, avaricious, jealous, obscene. I could give you, said he, the minutest details of the meanness, deceit, injustice, malice which underlie this picture of ethereal toil. This, he declared, is the truth of practical life based upon the most precise and only facts which we can observe and test.

But then, the physician continued, let us look again. Let us not reject a single one of these sordid facts. But let us see also the

¹The story of the "Three Distances" is condensed (quoted and paraphrased) from Maeterlinck's *Life of the Bee*, pages 328-344 (translated by Sutro).

great and curious force which lies back of them. Lowly as they are, these peasants are not so low as their ancestors before the French Revolution. Just as they are, they share in the upward struggle of life and mind.

What one thinks of life as a whole, says Maeterlinck, and of almost every moment of it depends upon whether he sees it from the first or the second or the third of these three distances—far off in the glow of romance, close up to its ugly worst, or inside where life makes its upward fight.

These three views show the three estates of men.

I. PARADISE

The first is Paradise. Paradise of children, Paradise of poets, Paradise of those who expect at once the Age of Gold. It is the Land where Santa Claus is still alive. It is the Land of Song where

The year's at the spring
And the day's at the morn;
.
The lark's on the wing;
.
God's in his heaven—
All's right with the world!

All's right with the world. So thought the captive Jew in Babylon. The warfare of his people was accomplished, their iniquities were pardoned, their afflictions overpast. They were now to go back and reign in a glorified Jerusalem to which the dromedaries of Midian and the flocks of Kedar and the ships of Tarshish and the kings of strangers would come bringing the wealth and homage of the world.

All's right with the world. So thought the French Republicans in 1790 when two hundred thousand of them, men and women, rich and poor, ran together with spades and barrows to erect on the Field of Mars an Altar of Liberty. A year before they had pulled down the Bastille. With it they had pulled down the world-old tyrannies of Church and State. And now they were to establish the reign of Liberty, Equality, and Fraternity forevermore.

All's right with the world. So thought our liberated blacks in 1865. I remember a song they sang in honor of one of their prophets who had foretold the good day and who had left the dying charge that he be wakened from his grave for the Great Jubilee. In '65 they thought that the Great Jubilee was at hand and sang:

The good time's coming,
 It's almost here.
 It's been long, long, long on the way.
 Now run tell Elijah
 To hurry up Pomp
 To meet us at the gum tree
 Down by the swamp
 To wake Nicodemus today.

All's right with the world. So thought millions of men and women, in all the warring nations on Armistice Day of 1918. War is at an end, they cried. We have finished with war in this horrible four-year Armageddon. We have been tormented with sword and with hunger and with death. We have drunk of the wine of the wrath of God which was poured out without mixture into the cup of His indignation. But all that is now past. The oppression of the laborer is past. The oppression of the backward races and of the little nations is past. The wicked devices of secret diplomacy, with its secret covenants, secretly arrived at—all that is past. The Age of Gold has come. We have found Paradise.

II. PARADISE LOST

But, alas, it is hard to stay in Paradise. Clergymen with nicely laundered voices hush the memory of Adam's fall and the Lamentations of Jeremiah and the despair of Ecclesiastes and the torments of Job and the hell of John Calvin and make the text read: "Except ye repent (in a degree) and be converted (to an extent) ye shall be damned (in a measure)." But that text will not do for the physician who every day sees disease at its ugliest. It will not do for the social physician who finds in several districts of one Indiana township more than half the children imbecile as a result of vice. And that jellyfish text will not now do for any of us who find a World Peace of bloodshed and wholesale starvation not less dreadful than the World War. No wonder we have the great pessimists Molière, Schopenhauer, Swift, Nietzsche. Shakespeare, the greatest of them, did not imagine any city or state in which a great and good man could succeed or even survive except as a hermit. Shakespeare has no hero. Brutus and Hamlet go down to death and the generous but disillusioned Timon cries

. . . . All is oblique
 There's nothing level in our cursed natures
 But direct villany. Therefore be abhorred
 All feasts, societies, and throngs of men.

.
 Timon will to the woods where he shall find
 The unkindest beast more kinder than mankind.

III. PARADISE REGAINED

Nevertheless— It is possible to know the worst and *not* be a pessimist—to meet the worst without fear, without surrender.

The scholar at his best does so. The scholar undertakes to *destroy* the plagues, yellow fever, tuberculosis, syphilis, and the rest.

The scholar undertakes to *destroy* the conditions which multiply the epileptic, the blind, the imbecile.

The scholar undertakes to *fight* poverty by finding new and unlimited energies in place of coal and by furnishing the conditions for economic liberty which underlies political liberty.

The scholar knows the physical hells better than anyone else and he is not afraid. Without fear, without haste, without rest, he goes about to destroy them and to make not a new heaven but a new earth. In all these things this University, thruout its hundred years, has played and now plays its part.

Still greater is the work of poet and prophet. These men do not give us food or coal or medicine. They give us a more necessary thing. They teach us with what will to meet the meanness, uncleanness, cruelty, treachery, and hate which are everywhere among men and in all human institutions. They are not all alike, these men. They are of every sort. There are almost four hundred of you graduates and you have every variety of disposition and of experience. But the one of you whose experience is most bitter and whose disposition is most black can find a great man who is like yourself,—who has met the worst that you have met and has fought his way thru. One like Elijah fights to the end with the courage of despair. One like William James fights *not* with despair, with cheer rather and exultation, a trumpet at his lips. One like Booker Washington is victim of a race hatred from which there seems no escape—and he escapes. No man—I heard him say it—no race shall degrade me by making me hate them. One like Lincoln faces the tragic years with grief but also with laughter, with unbroken patience and unbroken will.

Does no one of these men win you to his banner of faith and of battle?

Then I show you a greater sight.

I show you the countless multitude of *nameless* men and women who come up thru the awful centuries covered with dust and blood but who never quite despair and who never surrender. Jew and Greek, Barbarian and Scythian, Scholar and Clown, Publican, Thief and Harlot—how different they are, how alike they are—the glory and shame of the world!

Go up above them if you can—as far as you can—into the world of beauty and goodness even as the Son of Man went up into the Mountain of Transfiguration.

But you can never go high enough alone to reach Paradise.

You must go down with the Son of Man into the thick of the struggling multitude. You belong with them. You are of one blood and of like passions with them. You must march with them. You must march in the dread pageant which goes to Golgotha. It may be to hang there between thieves, and it may be to find victory when you can say to one of them: Brother, this day together we enter Paradise.



AUG 81

N. MANCHESTER,
INDIANA 46962

